e Vehicle.
guide

528i
540i

sedan
sport wagon

ations, and thank you for choosing a BMW.

familiarity with your vehicle will provide you with enhanced control and hen you drive it. We therefore have this request:

e the time to read this Owner's Manual and familiarize yourself with the n that we have compiled for you before starting off in your new car. It mportant data and instructions intended to assist you in gaining maximum atisfaction from the unique range of technical features on your BMW. The so contains information on care and maintenance designed to enhance safety and contribute to maintaining the value of your BMW throughout an service life.

r's Manual should be considered a permanent part of this vehicle. tay with the vehicle when sold to provide the next owner with important safety and maintenance information.

al is supplemented by a Service and Warranty Information Booklet ls) or a Warranty and Service Guide Booklet (Canadian models). mend that you read this publication thoroughly.

is covered by the following warranties:

icle Limited Warranty

Warranty Rust Perforation

Emissions System Defect Warranty

Emissions Performance Warranty

a Emission Control System Limited Warranty

nformation about these warranties is listed in the Service and Warranty n Booklet (US models) or in the Warranty and Service Guide Booklet models).

ou an enjoyable driving experience.

ls used

ese sections contain vital infor-
tion – please read the accom-
text passages carefully, both
own safety and to prevent dam-
our BMW.◀

ese passages contain informa-
n on special and unique fea-
your vehicle.◀

licates special information on
cycling.◀

tes the end of a note.

tes special equipment, country-
equipment and optional extras.

licates that you should consult
relevant section of this
Manual for information on a
r part or assembly.

erts you to functions which can
adjusted by your authorized
enter ("Car Memory" or "Key
"). Refer to page 58.◀

The individual vehicle

On buying your BMW, you have decided in favor of a model with individualized equipment and features. This Owner's Manual describes all models and equipment that BMW offers within the same group.

We hope you will understand that equipment and features are included which you might not have chosen for your vehicle. Any differences can easily be identified, since all optional accessories and special equipment are marked with an asterisk *.

If your BMW features equipment which is not described in this Owner's Manual (car radio or telephone, for instance), Supplementary Owner's Manuals are enclosed. We ask you to read these manuals as well.

portant safety information!
r your own safety, use genuine
d accessories approved by

ou purchase accessories tested
roved by BMW and Original
arts, you simultaneously acquire
rance that they have been
hly tested by BMW to ensure
n performance when installed
vehicle.

arrants these parts to be free
fects in material and workman-

ll not accept any liability for
resulting from installation of
d accessories not approved by

annot test every product from
anufacturers to verify if it can be
a BMW safely and without risk
the vehicle, its operation, or its
nts.

BMW Parts, BMW Accessories
er products approved by BMW,
with professional advice on
ese items, are available from all
enters.

Installation and operation of non-BMW approved accessories such as alarms, radios, amplifiers, radar detectors, wheels, suspension components, brake dust shields, telephones (including operation of any portable cellular phone from within the vehicle without using an externally-mounted antenna) or transceiver equipment (C.B., walkie-talkie, ham radio, for instance) may cause extensive damage to the vehicle, compromise its safety, interfere with the vehicle's electrical system, or affect the validity of the BMW Limited Warranty. Visit your authorized BMW center for additional information.◀

Maintenance, replacement, or repair of the emission control devices and systems may be performed by any automotive repair establishment or individual using any certified automotive part.◀

wned and operated in the US.

fect which could cause a crash or could cause injury or death, you should
y Traffic Safety Administration (NHTSA) in addition to notifying BMW of
stwood, New Jersey 07675-1227, Telephone (201) 307-4000.

may open an investigation, and if it finds that a safety defect exists in
l and remedy campaign. However, NHTSA cannot become involved in
dealer, or BMW of North America, Inc.

the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in
SA, U.S. Department of Transportation, Washington, D.C. 20590. You
motor vehicle safety from the Hotline.

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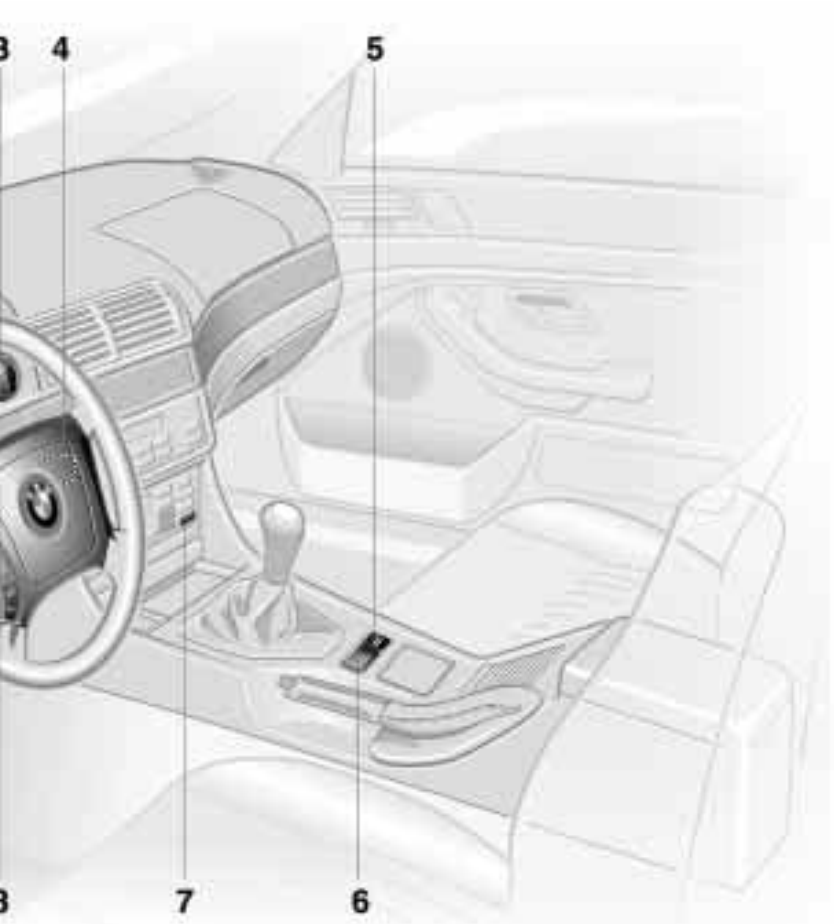
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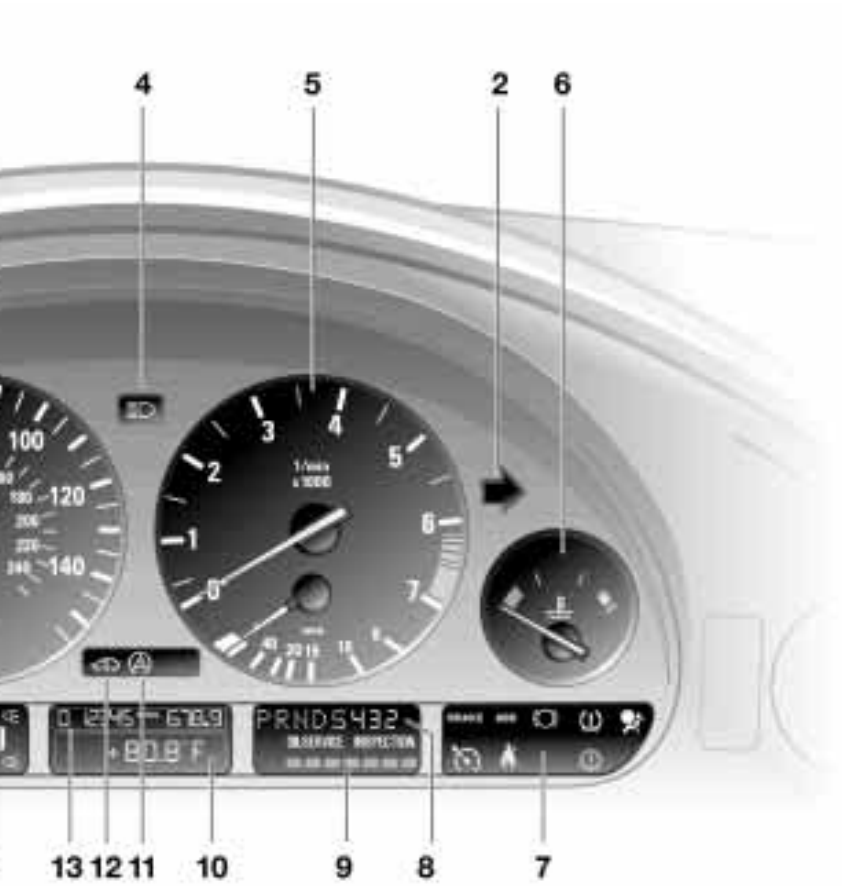
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7

splay for onboard computer
peration via the turn signal lever,
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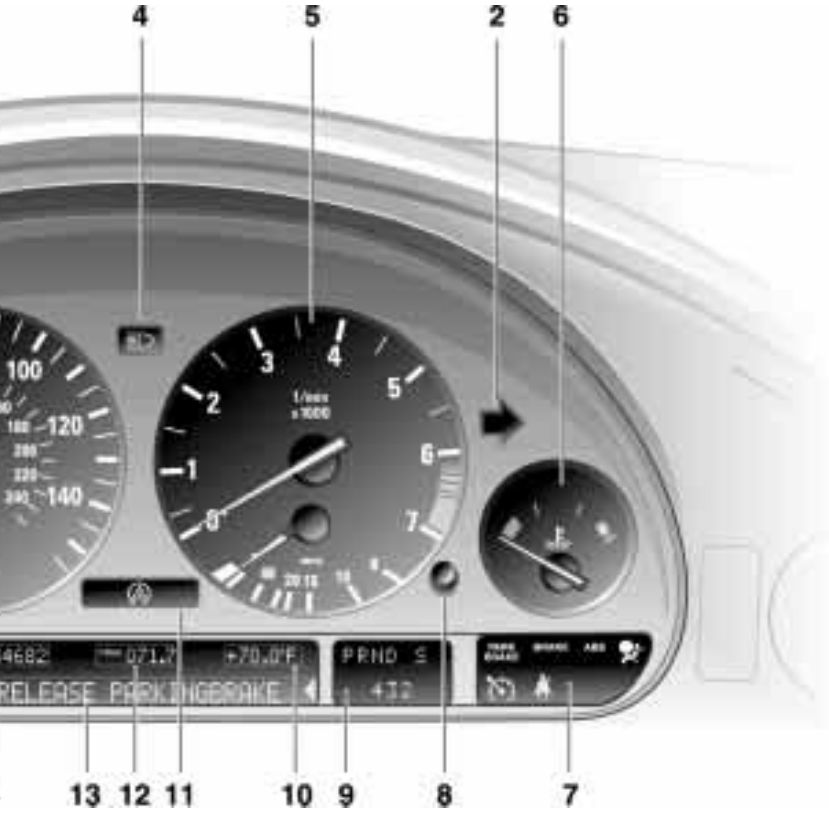
4
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RELEASE PARKINGBRAKE
PRND S
432
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utside temperature display 82
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ability Control plus Traction
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top immediately

Battery charge current ●
The battery is no longer being charged. There is a malfunction ternator V-belt or in the charg- uit of the alternator. Please con- nearest BMW center.

he ribbed V-belt is defective, do t continue driving. The engine e damaged due to overheating. bed V-belt is defective, in- steering effort is also re- d

Engine oil pressure ●
Comes on while the engine is unning and the "STOP! ENGINE SS" message appears in the Control: Stop vehicle and switch he immediately. Check level of gine, top up as required. If oil correct: Please contact the BMW center.

not continue driving. The en- he could be damaged because quate lubrication.◀

Tire Pressure Control (RDC)* ●
In addition, there is an acoustical warning signal: A tire failure has occurred. Reduce vehicle speed immediately and stop the vehicle. Avoid hard brake applications. Do not oversteer. For additional information: Refer to page 92.

Parking brake*, brake hydraulic system ●
Comes on when you engage the parking brake. For additional information: Refer to page 69.

Comes on although the parking brake is released: Have the brake fluid level checked. Before driving further, be sure to read the notes on pages 130 and 152.

Also comes on with the message "CHECK BRAKE PADS" in the Check Control.

Parking brake warning lamp*/ Brake hydraulic system for Canadian models.

An important reminder

Parking brake*
Comes on when you engage the parking brake.
ditional information: Refer to
69.

Parking brake warning lamp* for Canadian models.

Please fasten safety belts
Together with an acoustic signal or a message* in the Check
l. Comes on until the safety belts
stened. For additional information
ety belts: Refer to page 59.

Airbags
Please have the system inspected by your authorized
center.
ditional information: Refer to
60.

Yellow: Check as soon as possible

Antilock Brake System (ABS)
ABS has been deactivated in response to system malfunction. Conventional braking efficiency is available without limitations. Please have the system inspected by your authorized BMW center.
For additional information: Refer to page 127.

Antilock Brake System (ABS) warning lamp for Canadian models.

Engine oil level
Comes on after the engine has been shut off: Check the engine oil level. For additional information: Refer to page 149.

Automatic transmission*
Because of a malfunction, the automatic transmission shifts only in the emergency program. Please consult the nearest authorized BMW center.
For additional information: Refer to pages 73, 76.

Brake pads*
Have the brake pads checked.
For additional information: Refer to page 130.

Electronic Engine Power Control
EML)*
Malfunction in the EML. When
higher brake application pres-
y be necessary and brake pedal
ay be significantly longer.
ave the system inspected by
horized BMW center.

CHECK ENGINE lamp
f the indicator lamp comes on
either continuously or intermit-
his indicates a fault in the emis-
lated electronic systems.
h the vehicle remains opera-
ou should have the systems
l by your BMW center at the
possible opportunity.
itional information: Refer to
2.

CHECK ENGINE warning lamp
or Canadian models.

Green: For your information

Turn signal
Flashes when the turn signals are in operation. Rapid flashing indicates a system malfunction.
For additional information: Refer to page 77.

Cruise control
Lights up when the cruise control is activated. Available for operation via the multifunction steering wheel.
For additional information: Refer to page 80.

Fog lamps
Lights up whenever you switch on the fog lamps.
For additional information: Refer to page 95.

Blue: For your information

High beam
Lights up when the high beams are on or the headlamp flasher is actuated.
For additional information: Refer to page 77.

ular phone: Receive a call, initiate
ng and terminate a call

io/Telephone: Select

io/Telephone: Scan backward or
n station keys or scroll in the
ne listings.
t forward and reverse for CD and
sette modes

io/Telephone: Volume

io/Telephone: Forward scan or
n station keys or scroll in the
ne listings.
t forward and reverse for CD and
sette modes

6 Horn: The entire surface

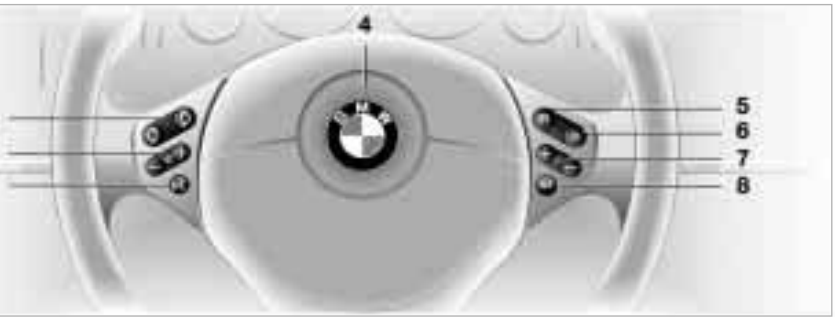
7 Cruise control: Activate stored setting (resume)

8 Cruise control: Store and accelerate (+); decelerate and store (–)

9 Cruise control: Activate/Interrupt/ Deactivate

10 Recirculated-air mode and AUC or steering wheel heating: Switch on and off

MFL)*



ar phone: Receive a call, initiate g and terminate a call

/Telephone: Volume

/Telephone: Forward/Back-scan or scan station keys or in the phone listings. orward and reverse for CD and tte modes

The entire surface

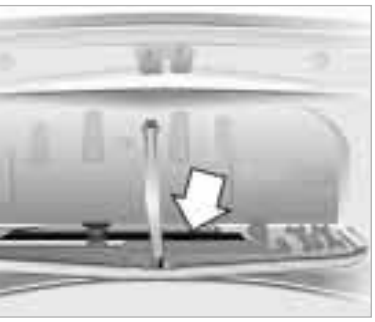
5 Cruise control: Activate stored setting (resume)

6 Cruise control: Activate/Interrupt/ Deactivate

7 Cruise control: Store and accelerate (+); decelerate and store (–)

8 Radio/Telephone: Select

ning triangle*



azard warning triangle is quickly
ble, stored in the onboard tool kit
ed on the inside of the luggage
artment lid (tailgate).
en the container, loosen the wing
.

Comply with legal requirements
which cover the availability of a
d warning triangle in the car.◀

First-aid kit*

The first-aid kit is located under the front passenger's seat.

To remove: Lift the release lever on the front (arrow) and pull the first-aid kit forward out of its support.

To store: Position the back of the kit into the support, then push back until the lever engages.

Some of the articles in the first-aid kit may be used within a limited time only. For this reason, check the expiration dates of each of the items regularly, and replace any whose expiration dates have passed. You can acquire replacements in any drugstore or pharmacy.
Comply with legal requirements which cover availability of a first-aid kit in your vehicle.◀

and friendly to the nment

pen the filler cap carefully to event fuel from spraying out. ay may cause injury.
op off. Topping off may cause age.◀

e filler cap in the bracket d to the fuel filler door.

When refueling, insert the filler nozzle completely into the filler pipe. Pulling the nozzle out of the pipe during refueling

- results in premature pump shutoff and
- will reduce the effect of the vapor recovery system on the pump.

Close the fuel cap carefully after refueling. A loose or missing cap will activate the Service Engine lamp.◀

inflation pressure

flation pressures are indicated on
er attached to the B-pillar behind
iver's door (visible with door

k tire pressures

ssure specifications are indicated
(kilopascal) for tires at ambient
rature (refer also to the next
).

hicles with Tire Pressure Control
*:
a correction of the tire inflation
ure, reactivate the system. Refer
e 92.

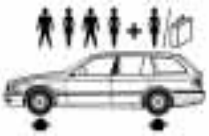
Check tire inflation pressures regularly – at least every two weeks and before beginning a longer trip. Incorrect tire pressure can lead to tire damage and accidents.
Check the inflation pressure of the spare tire also. Inflate the spare tire to the highest inflation of any tire on your vehicle.◀

Comply with tire approval specifications

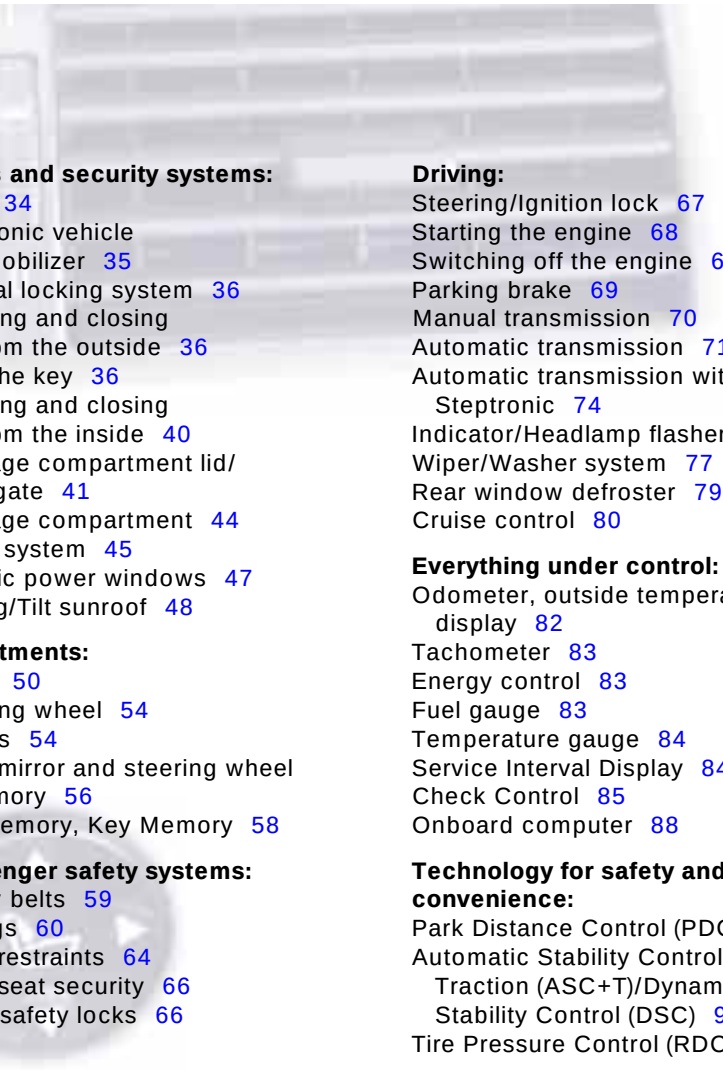
The inflation pressures in the table apply to tires from BMW approved manufacturers. Your BMW center is familiar with these pressures. Higher pressures may be specified for tires from other manufacturers. You will find a list of approved tires beginning on page 140.

Your vehicle is equipped with tires that not only meet US standards, but also European standards. We recommend the exclusive use of BMW approved tires.

	US/CDN:		
0)	41 (280)	33 (230)	41 (280)
	outside US/CDN:		
0)	33 (230)	33 (230)	41 (280)
0)	39 (270)	41 (280)	48 (330)
	39 (270)	–	48 (330)
0)	35 (240)	36 (250)	44 (300)
0)	35 (240)	36 (250)	44 (300)
	35 (240)		44 (340)



10)	35 (240)	36 (250)	44 (300)
30)	38 (260)	39 (270)	46 (320)
10)	35 (240)	36 (250)	44 (300)
30)	38 (260)	39 (270)	46 (320)



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and ignition key
cks for the luggage compart-
lid/tailgate, rear backrest and
compartment cannot be oper-
with this key. This is useful for
parking, for instance.

Replacement keys

Replacement keys are available exclusively through your authorized BMW center. Your BMW center is obligated to ensure that a person requesting a key is authorized to do so since the keys belong to a security system (refer to "Electronic vehicle immobilizer" on page 35).

If possible, take all of the master keys that belong to the vehicle with you when you pick up your replacement key.
Whenever you receive a new replacement key, turn that key to position 2 in the ignition lock once (ignition switched on) and then back. This allows the electronic vehicle immobilizer to "learn" the new key.◀

the electronics work

heart of this system is an elec-
chip which is integrated into the
he lock mechanism itself is actu-
dual-function device, simulta-
ly serving as a communications
ce designed to allow the security
n to maintain a continuous stream
able, vehicle-specific signals with
ectronic circuitry in the key. The
n will not release the ignition, fuel
on and starter unless it recog-
an "authorized" key.

Force applied to the key can dam-
age the integrated electronic cir-
A damaged key can no longer be
o start the engine.◀

ing and closing – from the outside

e key

n of the key in the driver's door
ocks the driver's door only.
the key a second time unlocks
e remaining doors, the luggage
ment lid/tailgate and the fuel
or.

u can have an acknowledgment
essage set to confirm that the
nas been secured correctly (not
l at this time).◀

Convenience operation

You can also operate the windows and sliding/tilt sunroof via the door lock.

- To open: With the door closed, turn the key to the "Unlock" position and hold it.
- To close: With the door closed, turn the key to the "Lock" position and hold it.

Watch the closing process carefully and be sure that no one is trapped by the closing motion. The windows/sunroof stop moving immediately when you release the key.◀

Manual operation

(in the event of an electrical failure)

Turn the key all the way to the left or right to unlock/lock the door.

er keys

with a transmitter for remote con-
e master keys. Refer to page 34.

Since children might be able to
ock the doors from the inside,
he vehicle's keys with you so that
hicle can be opened again from
tside at any time.◀

Master keys that are used repeatedly are always ready for operation since the battery in the key is charged automatically in the steering lock as you drive.
If it is no longer possible to unlock the vehicle via the remote control, the battery is discharged. Use this key while driving for an extended period in order to charge the battery. Refer also to page 34.
To prevent unauthorized use of the remote control, surrender only the door and ignition key 3 or the spare key 2 (refer to page 34) when leaving the vehicle for valet parking, for example.

In the event of a system malfunction, please contact your BMW center. You can also obtain replacement keys there.◀

outside

k and secure
utton 2.

Deactivate the tilt sensor alarm system and interior motion sensor

After locking the vehicle press button 2 again.
For additional information: Refer to page 46.

To switch on the interior lamps

After locking the car, press button 2.

nal systems

al systems or devices may cause nterference in the functions of the e control.
should occur, you can unlock and he vehicle via the door lock with a r key.

For US owners only

The transmitter and receiver units comply with part 15 of the FCC (Federal Communication Commission) regulations. Operation is governed by the following:

FCC ID: LX8EWS
LX8FZVS
LX8FZVE

Compliance statement:
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Any unauthorized modifications to these devices could void the user's authority to operate the equipment.◀

nside

nly the driver's door was un-
ked from the outside and you
e button
er doors, the luggage compart-
id/tailgate and rear window
e fuel filler door will be un-
d if the driver's door is open
iver's door will be locked again
it is closed.◀

ock and open the doors

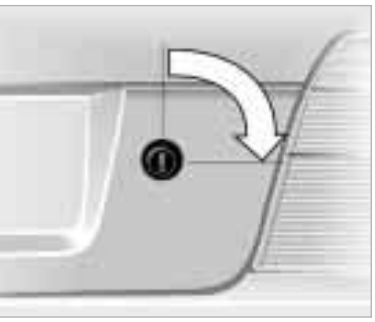
unlock the doors together with
utton for the central locking sys-
nd then pull the door handle
the armrest or
e release handle for each door
The first pull unlocks the door,
e second one opens it.

ors locked from outside can be
ened from inside by first press-
button and then pulling a re-
ndle twice.◀

To engage locks

- Use the central locking button to lock all doors at once, or
- press the individual door lock buttons down. As an added design feature to prevent the driver from being inadvertently locked out of the vehicle, the driver's door lock button will not engage as long as the door is open.

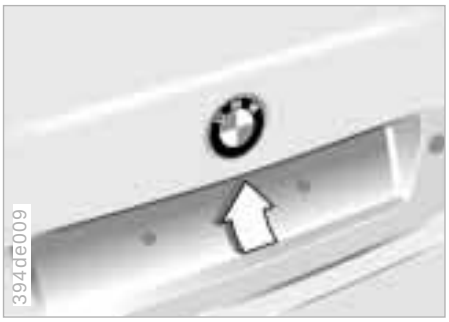
When the vehicle is moving, do not lock the doors with their lock buttons since doors locked in this manner would not open automatically in the event of an accident.
Children might be able to lock the doors from the inside. For this reason, you should always remove the key and take it with you to be sure that you will be able to unlock the car from the outside at all times.◀



re separately

he master key to the right past the ance point and then pull it out in rizontal position.

ocks the luggage compartment gate and disconnects it from the l locking system. This feature can ed to prevent unauthorized s to the luggage compartment you surrender the door and igni- ey (refer to page 34) for valet park- r instance.



To open from outside

Press the button (arrow): The luggage compartment lid/tailgate opens slightly.

Manual operation

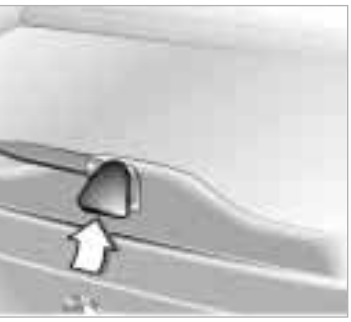
(in the event of an electrical failure)

sedan:
Turn the master key to the left in the luggage compartment lock clear to the stop – the luggage compartment lid will open slightly.

The luggage compartment is locked again as soon as you close the lid.

sport wagon:
Refer to page 181.

ate



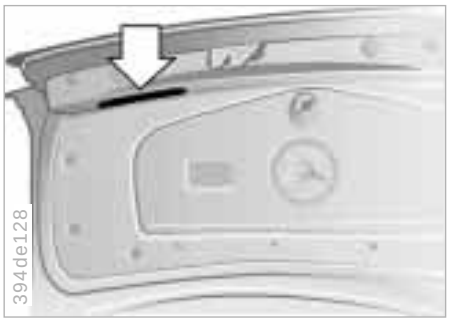
indow – sport wagon

ems can be loaded or unloaded
f the rear window is opened
ely.

e button (arrow): The rear win-
ens slightly. It can now be tilted

e window down to close it.

pointed or sharp-edged objects
uld strike the rear window while
be sure to provide protection
all edges. If you do not do this,
ing conductors of the rear win-
uld be damaged.◀



Closing – sedan

The handle recess (arrow) next to the lock mechanism is designed to assist you in closing the luggage compartment lid.

gate

When the tailgate of the sport wagon is opened, the clearance he ground to the upper edge is than 6.5 feet (two meters). Please his in mind when opening the tail- n a garage, for example).◀

Operate the vehicle only when the uggage compartment lid/tailgate npletely closed. Otherwise, st fumes could penetrate the r of the vehicle. Should it be utely necessary to operate the e with the luggage compartment gate open:
se all windows. Shut the sliding/ sunroof
ease the airflow of the automatic ate control to a high level. Refer age 101.◀

r

eft-hand side of the luggage
tment is a hanger for fastening
g bags, packages or similar

ctivate and deactivate the n system

the vehicle is locked or unlocked he key or the remote control, the system is also simultaneously or disarmed.
terior motion sensor is activated x. 30 seconds after you have fin- locking the car.

ystem indicates that it has been ctly armed by switching on the d flashers for a single cycle and by ng an acoustical signal.

You can have different acknowl- edgment messages set to confirm g and disarming (not released at me).◀

the system is active, you can still ccess to the luggage compart- by pressing button 3 on the e control transmitter (refer to 39). When you close the luggage artment lid/tailgate, it locks again.

Indicator lamp displays

- The indicator lamp below the interior rearview mirror flashes continuously: The system is armed
- The indicator lamp flashes during arming: Door(s), the hood or luggage compartment lid/tailgate are not completely closed. Even if you do not close the alerted area, the system begins to monitor the remaining areas, and the indicator lamp flashes continuously after 10 seconds. However, the interior motion sensor is not activated
- If the indicator lamp goes out when the system is disarmed: No manipulation or attempted intrusions have been detected in the period since the system was armed

r motion sensor

stration depicts the transmitter eiver of the interior motion sen-

for the interior motion sensor to properly, the windows and ilt sunroof must be completely

eless, you should deactivate the motion sensor (refer to the s column) if you intend to leave lows or sliding/tilt sunroof

he ignition has been switched off:
can still operate the windows as
as neither of the front doors has
n opened. To open the window,
ss the switch beyond the resis-
e point.

Remove the key from the ignition
when you leave the vehicle, so
ildren cannot operate the power
ws and possibly injure them-
s.◀

e convenience mode via the door
r the remote control, refer to
36 or 37.

y feature

tact strip is integrated into the
side of each of the upper window
sections. If pressure is exerted
st this contact strip while a win-
s being raised, the system will
nd by stopping the window and
etracting it a small distance.

Despite this safety feature, be extremely careful that the closing path of the window is not obstructed whenever it is closed. Otherwise, an object might not touch the contact strip in some situations (very thin objects, for instance).
You can override this safety feature by pressing the switch beyond the resistance point and holding it.
Because the power windows are sealed at high pressure to prevent wind noise when closed, a powerful motor is required for efficient closing. When closing the windows, always be sure that they are not obstructed in any way. Unsupervised use of these systems can result in serious personal injury. Remove the ignition key to deactivate the electric power windows whenever you leave the car. Never leave the keys in the car with unsupervised children. Never place anything that could obstruct the driver's vision on or next to the windows.◀

ng/Tilt sunroof*

prevent injuries, exercise care
en closing the sliding/tilt sun-
keep it in your field of vision
shut.
eaving the car, switch off the
sunroof mechanism by taking
gnition key. Do not leave chil-
attended in the vehicle with ac-
vehicle keys. Use of the key can
starting of the engine and oper-
vehicle systems such as power
etc. Unsupervised use of these
can result in serious personal

avoid pressure or drafts in the
er compartment when the sun-
pen or lifted by opening the air
the dashboard and increasing
upply as required. Refer to
8, 101.
nroof is completely open, air
nces may be caused in the ve-
en you are driving at higher
Close the roof as far as is nec-
ntil this natural phenomenon

convenience mode via the door
he remote control, refer to
or 37.

Lifting – opening – closing

From ignition key position 1, press the switch or slide it to the desired direction until you feel resistance.

When lifting, the headliner retracts several inches.

After the ignition has been switched off, you can still operate the sliding/tilt sunroof as long as neither of the front doors has been opened.

Automatic* opening and closing

Press the appropriate end of the control switch past the resistance point and then release it.

ng/Tilt sunroof with glass nroof*

ptions and control procedures are tially the same as those previ- described for the sliding/tilt sun- n order to open the raised roof, the control switch towards " until the roof has reached the d position.

eadliner insert slides back some- when you raise the sunroof. When nroof is opened the headliner ts with it. The headliner will then atically remain in its retracted on, but can be repositioned as d.

Power loss or malfunction

After interruptions in the electrical supply (when the battery is disconnected, for instance), the sunroof may only lift. To reinitialize the mechanism:

1 Raise the sliding/tilt sunroof all the way
2 Press and hold the switch for approximately twenty seconds.

In the event of an electrical malfunction, you can also operate the sliding/tilt sunroof manually. Refer to page 180.

ric power seats

gle (only driver's side)
rd/Back adjustment
on height
est angle
restraint height
e tilt angle of the head restraint
ng it.

mply with the adjustment
tructions in the preceding
Failure to do so could result in
ed personal safety.◀

Correct sitting posture

To reduce strain on the spinal column, sit all the way back in the seat and rest your back fully against the backrest. The ideal sitting posture is achieved with your head extending from your spine in a straight line.
For long-distance driving, you may wish to increase the backrest tilt-angle slightly to reduce muscular tension. Please remember that you should always remain able to grasp the entire periphery of the steering wheel without straightening your arms.

Lumbar support*

Refer to the BMW comfort seat on the next page.

Comply with the adjustment instructions on page 50. Failure to could result in diminished safety.◀

Shoulder support

You can use the adjustable upper backrest for supplementary support in the shoulder region. This provides a relaxed driving position and helps relieve stress on the shoulder muscles.

Press the rocker switch: The support angle of the upper backrest section is adjusted.

To obtain an optimal seating posture, we recommend:

Driver and front passenger:

1 Adjust the upper backrest section to its extreme rear position
2 Adjust to the optimal seating posture as shown in the left column
3 Bring the upper backrest section forward until your shoulders enjoy firm support.

sports seat*

gle (only driver's side)

rd/Back adjustment

on height

est angle

restraint height

e tilt angle of the head restraint
y by rotating it.

mply with the adjustment in-
uctions on page 50. Failure to
uld result in diminished per-
fety.◀

Thigh support

Press the rocker switch: You can adjust the thigh support to meet your personal requirements.

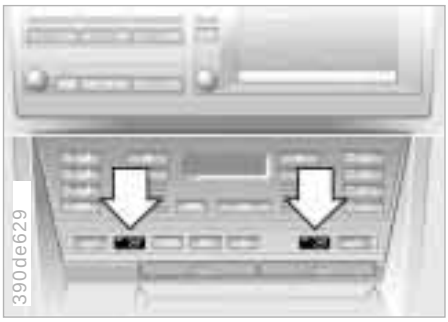
restraints

ust the angle of the front head nts: Adjust by tilting the head nt.

ust the height of the rear head nts: Adjust by pulling or applying ure.

Head restraints reduce the risk of spinal injury in the event of an ent. Adjust the head restraint so s center is approximately level our ears.
the center-rear head restraint in ly-lowered position at all times, pulling it out limits its function.◀

BMW active seat*



Active changes in the seat's surface help to avoid muscle cramps, pain in the spine's lumbar region and fatigue.

To activate the seat, press the button (arrow).

For additional details concerning the BMW active seat, please refer to the chapter describing "Advanced technology" on page 190.

atic steering wheel ment

conjunction with seat, mirror ering wheel memory)

to make it easier to get into and e car, the steering wheel auto- y moves into the top position rns to the driving (memory) po-

omatic feature is controlled by tion of the ignition key and by er's door.

Mirrors

Exterior mirrors

1 Mirror switch for 4-way adjustment
2 Left/Right selection switch

You can also adjust the mirrors manually by pressing against the outer edges of their lenses.

To store the mirror settings: Refer to "Seat, mirror and steering wheel memory" on page 56.

or rearview mirror

luce glare from vehicles behind ter dark, tilt the mirror by moving nall lever.

ed vanity mirror

lown the sun visor and slide the panel to the side as required.

irror lamps operate in ignition key ons 1 and 2.

visors

can be folded down toward the hield or swiveled out against the indows.

Interior rearview mirror with automatic dimming feature*

By responding to the effects of ambient light and the glare from following traffic, this mirror automatically dims through an infinitely-variable range.

The mirror automatically reverts to its clear, undimmed setting whenever you select "Reverse."

For proper functioning of the mirror, be sure that the two photocells are unobstructed and clean. One of the photocells (arrow) is positioned in the mirror's glass, while the other is slightly offset on the opposite side of the mirror.

For an explanation of the electro-chromic technology used in this mirror, refer to page 192.

memory

re

n key at position 1 or 2.
t the desired positions for the door mirror and steering wheel.
the MEMORY button: The indi-lamp in the button comes on.
memory button 1, 2 or 3, as
d: The indicator lamp goes out.

To select a stored setting

Convenience function:

1 The driver's door remains open after unlocking or the ignition key is in position 1.
2 Briefly press memory button 1, 2 or 3, as desired.
Movement stops immediately when one of the seat-adjustment or memory buttons is activated during the adjustment process.

Security function:

1 The driver's door is closed and the ignition key is either removed or in position 0 or 2.
2 Press and hold the desired memory button (1, 2 or 3) until the adjustment process is completed.

If you press the MEMORY button accidentally: Press the button a second time; the indicator lamp goes out.

Do not call up a position from the memory while the vehicle is moving. There is a risk of accident from unexpected movement of the seat or steering wheel.◀

l memory

Your BMW center can adjust your vehicle's systems in such a man- at your personalized settings are atically called up for the seat, and steering wheel positions you unlock the car with your per- remote control.◀

f you make use of this setting mode, be sure that the footwell d the driver's seat is unobstructed e unlocking the vehicle. If you fail so, any persons or objects behind at could be injured or damaged earward movement of the seat.◀

our vehicle is unlocked with the
control, the vehicle recognizes
vidual user by means of a data
ge with the key, and makes
ents accordingly.

for you to distinguish between
keys, colored decals are
l together with the keys.

he system can do

thorized BMW center can
you with details on the capabili-
he Car Memory and Key
systems.

u will see this symbol through-
t the Owner's Manual. It is to
you at appropriate places of the
that are available to you.◀

mple of Key Memory is the auto-
djustment of the driver's power
h stored settings for the individ-
on when the vehicle is un-

For your safety, comply with the ollowing instructions for wearing belts. If you do not, the safety may not be able to provide their num protection. All passengers in hicle should be aware of and y with this information:
allow more than one person to a single safety belt. Never allow s or small children to ride in a pas- r's lap.
twisting the belt while routing it across the hips and shoulder. Do ow the belt to rest against hard or objects in your pockets. Never the belt across your neck, do not across sharp edges. Be sure that lt does not become caught or ed.
the safety belt as firmly as possi- ainst your body. You should avoid ng bulky clothing that prevents it loing so. Pull the belt periodically ension it across your shoulder. In ent of a frontal impact, a loose lap ould slide over your hips, leading lominal injury. In addition, the belt's restraint effectiveness is ed if the belt is worn loosely.
tant mothers should always wear afety belts, taking care to position belt against the lower hips, it will not exert pressure against dominal area.◀

For care instructions, refer to page 159.

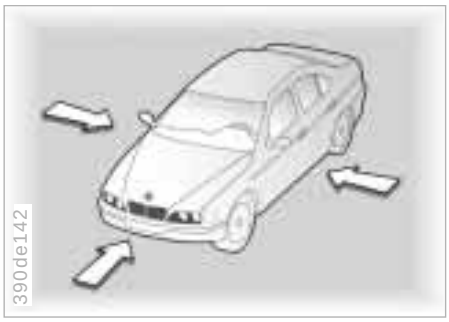
sedan with through-loading system*: Please comply with the instructions for the center safety belt on page 112.
sport wagon: If the center safety belt cannot be pulled out, the larger rear backrest section is not engaged. Refer to page 116.◀

If the safety belt system has been subjected to the stresses involved in an accident or otherwise damaged: Have the entire safety belt mechanism replaced by your BMW center, including the safety belt tensioner. In addition, have your BMW center inspect the safety belt anchors. If a child restraint system was in the vehicle during an accident, consult the manufacturer's instructions regarding replacement.◀

Child restraint systems*

Never install a rear-facing child restraint device on the front passenger seat. Otherwise, injuries could occur when the airbag is triggered in the event of an accident. Children should always ride in the rear.
Do not attempt to modify child restraint systems. If you do this, the protection provided by these systems could be impaired.◀

e side airbags in the rear pas-
nger area* of your vehicle may
have been deactivated either at
of manufacture or by a BMW
You may have them activated if
ire to do so. Please contact
horized BMW center for addi-
formation.◀



The illustration depicts schematically the primary directions of vehicle impact which initiate an airbag deployment.

g correctly with airbags

For your safety, comply with the ollowing instructions for the air- If you do not, the airbags may not e to provide their maximum pro- n. All passengers in the vehicle d be aware of and comply with formation:
rbags are supplemental restraint es designed to provide extra pro- n; they are not a substitute for belts. Wear your safety belt at all The airbags will not be triggered event of a minor accident, a vehi- l-over, or collisions from the rear. se instances, the safety belt pro- optimal protection.
gs are located under cover panels steering wheel, in the dashboard, side trim panels in the front and and in the windshield pillars and des of the headliner.
t your seat to a position that pro- maximum distance between you e steering wheel, the instrument and the door while still allowing rtable and safe access to all e controls.

To avoid sustaining hand and arm injuries: Always grasp the steering wheel on the rim with the hands at the 9 and 3 o'clock positions: Do not place your hands on the center pad.
Never allow any objects to obstruct the area between the airbag and an occupant.
Do not use the cover panel above the passenger-side airbag as a storage area.
Do not apply adhesive materials to the cover panels of the airbags, cover them or modify them in any other way.
Do not install a rear-facing child restraint system in the front passenger seat of this car.
Children under 13 years of age and children less than 5 feet (150 cm) tall should ride only in the rear seat.
Infants or small children should never be held on the lap of a passenger.
If your car is equipped with side airbags in the rear passenger area, be sure that child restraints are mounted correctly and provided with the greatest-possible distance between the airbags in the side trim panels. Do not allow children to lean out of the child's seat in the direction of the side trim panels. If they do so, serious injuries can occur if the airbag is triggered.◀

re, we recommend that the rear e airbags, if provided, be deac- f you plan to transport children ar seat.

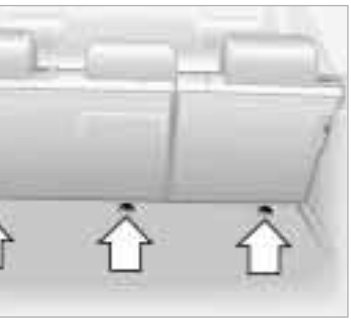
r seat side airbags may already en deactivated, either at the manufacture or by a BMW cen- els in the rear door opening ndicate the status of your rear e airbags. If your are uncertain status, or wish to have the air- tivated or deactivated, please your BMW center.

Even when all these guidelines are followed, there is still a small residual risk of injuries to the face, hands and arms occurring from airbag deployment in isolated instances. The ignition and inflation noise may provoke a mild temporary hearing loss in extremely sensitive individuals.

Airbag warning information is also provided on the sun visors.

For additional information concerning the airbag system, refer to pages 160 and 188.

s the right way for a larger child to
aring the safety belt when rear
irbags (arrow) are provided.



se a child restraint system with
strap, three additional tether
ge points (refer to the arrows –
tration shows the sport wagon)
en provided. Depending on the
selected for seating in the rear
er area, attach the tether strap
orresponding anchorage point
e the child restraint system. Re-
e cover first on the middle loca-

spective seating position is fit-
a headrest lift the headrest and
e tether strap between the head
the seat back.

ne tether strap according to the
straint manufacturer's instruc-

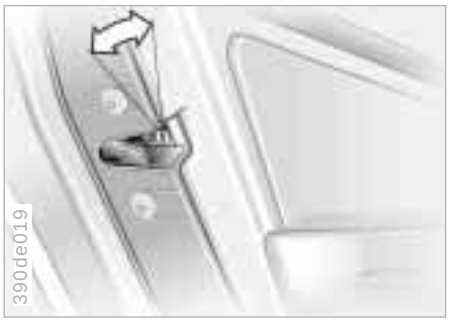
ger children should be secured in
propriate forward-facing child re-
system that has first been prop-
ecured with a safety belt. Never
a rear-facing child restraint sys-
the front passenger seat.
rongly urge you to carefully read
omply with the instructions for in-
ion and use provided by the child
nt's manufacturer whenever you
uch a device.
re that all occupants (of all ages)
n properly and securely restrained
imes.◀

r seating positions in your
e meet the recommendations
E J1819, an industry-recom-
ed practice for securing child
nt systems in motor vehicles.

t the safety belt

the safety belt, remove the eat and retract the safety belt to position on the belt retractor.

Child-safety locks



Insert the key into a rear door lock and turn it outward:

The door can now be opened from the outside only.

eering lock disengaged

ill find that it is often easier to turn
nition key from position 0 to posi-
when you move the steering
slightly to help disengage the

nition on

ctrical equipment and accesso-
e available for use.

arting the engine

Vehicles with manual transmis-
sion:
on the clutch when starting the
e. If you do not, a lock prevents
gine from starting.◀

g the engine

he engine. Do not press the erator pedal.

MW 528i, BMW 540i with man- l transmission:
actuate the starter for too short Do not turn it for more than ap- seconds. Release the ignition ediately as soon as the engine

llow the engine to warm up by t running while the vehicle re- tationary. Instead, begin driving tely at a moderate engine

40i with automatic transmission: MW is equipped with the conve- starting feature. Simply turn the osition 3 (starter) and then re- mmediately.
ter continues to operate auto- y.
omatic starting mode will not if the battery voltage is low. this condition arise, it remains to jump-start the engine (refer 182).◀

Should the engine fail to start on the first attempt (if it is very hot or cold, for instance):

- Press the accelerator pedal halfway down while engaging the starter.

Cold starts at extremely low temperatures, from approx. +5 °F (–15 °C) and at elevations above 3,300 feet (1,000 meters):

- It may be necessary to allow the starter to remain engaged somewhat longer than under normal operating conditions (approx. 10 seconds)
- Press the accelerator pedal halfway down while engaging the starter.

Engine idle speed is controlled by the engine computer system. Increased speeds at startup are normal and should decrease as the engine warms up. If engine speed does not decrease, service is required.

To prevent the battery from discharging, always deactivate electrical devices which are not in use. Switch the ignition off when the vehicle is not being driven.

king brake

ngage

ver engages automatically and ARK BRAKE" or "BRAKE" (in la "P") indicator lamp comes on in strument cluster in ignition key on 2. Refer to pages 22 and 23.

lease

p slightly on the lever, press the n and lower the lever.

arking brake is primarily designed vent the vehicle from rolling while d. It operates against the rear s.

If, in exceptional circumstances, it should be necessary to engage the parking brake while the vehicle is in motion, do not pull it with excessive pressure. Keep your thumb pressed against the release button while carefully pulling up the lever to apply moderate pressure.
Excessive pressure can lead to overbraking and loss of traction (fishtailing) at the rear.
The brake lamps do not come on when the parking brake is applied.
Vehicles with manual transmission:
Always engage the parking brake when parking on slopes and inclined surfaces, since placing the lever in 1st gear or reverse may not provide adequate resistance to rolling.
Vehicles with automatic transmission:
Place the selector lever in "Park."◀

To avoid corrosion, apply the parking brake lightly from time to time when coasting to a standstill (at a traffic signal, for instance), provided that it is safe to do so.

40i

t lever's neutral gate (dot in the on) is located between 3rd and rs.

hifting from each gear into ," the shift lever returns auto- y to this neutral position be- f its spring loading.

hen shifting gears in the 5th/ h-gear plane, be sure to press r lever to the right in order to inadvertent selection of a gear d/4th-gear plane.◀

Reverse

Select "Reverse" only when the vehicle is stationary. Press the shift lever to the left to overcome the resistance.

As you do this, the backup lamps will turn on automatically when the ignition key is in position 2.

Do not hold the vehicle in place on slopes by slipping or "riding" the clutch. Use the parking brake instead. A slipping clutch increases clutch wear.◀

ctor lever positions

P R N D 4 3 2

ansmission range display varies ding to model (refer to illustra-

ing engine

elector lever must be in "Park" or ral" before it is possible to start gine.

Range selection

A detent prevents inadvertent shifts into some selector lever positions. To release the shift-lock mechanism, press the button on the front of the selector handle (arrow).

While the vehicle is stationary and before shifting out of "Park" or "Neutral," depress the footbrake in order to disengage the selector lever's lock mechanism (Shiftlock).
Hold the footbrake down until starting off. Otherwise the vehicle will "creep" when a drive position is engaged.◀

tral

Neutral" only if your journey is ted for a long period.

e
atic shift program)

sition is designed for driving l normal operating conditions. ard gears are available.

rt Program

sition is recommended if you select a performance-oriented style.

3 and 2 – Shift limiter

Select this range when you wish to limit gear changes (on steep uphill or downhill slopes, for instance). The transmission shifts up only as far as the selected gear.

"Kickdown"

In the "Kickdown" mode, you achieve maximum performance.
To activate this mode, depress the accelerator pedal beyond the full-throttle position, at which a resistance point must be overcome.

ndicator lamp does not go out,
an place the selector lever in all
ons. However, the vehicle will now
rive forward with limited gear
ion.

these circumstances, avoid ex-
engine loads and consult the
st authorized BMW center.

Do not work in the engine com-
partment when a drive gear (for-
or reverse) is engaged. If you do
he vehicle could move.◀

mp-starting, towing and tow-
g, refer to pages 182 and 183.

ptronic*

or lever positions

R N D M/S

g engine

ine can only be started in selec- positions P ("Park") or N ("Neu-

Range selection

A detent prevents inadvertent shifts to the "Reverse" or "Park" selector lever positions. To disengage the detent, press the button on the front of the shift knob (arrow).

While the vehicle is stationary and before shifting out of "Park" or "Neutral," depress the footbrake in order to disengage the selector lever's lock mechanism (Shiftlock).
Hold the footbrake down until starting off. Otherwise the vehicle will "creep" when a drive position is engaged.◀

teptronic*

ive
matic shift program)

osition is designed for driving un-
normal operating conditions. All
rd gears are available.

kdown"

"Kickdown" mode, you achieve
num performance.
tivate this mode, depress the ac-
tor pedal beyond the full-throttle
on, at which a resistance point
be overcome.

M/S Manual mode and Sport Program

When you change from "D" to "M/S," the Sport Program is activated. This is indicated by "D S" in the gear selection display. The Sport Program is designed for performance-oriented driving.

With the first brief touch, the automatic transmission shifts from the Sport Program to manual mode. When you move the selector lever forward in the "+" direction, the transmission shifts up. When the lever is moved back in the "–" direction, the transmission shifts down. M1... M5 will be displayed in the gear indicator.

ptronic*

ding to the situation, for
ce in wintry conditions, the
e can be started in 2nd or
ear.

nic transmission control
e

f the indicator lamp comes on
r the message "TRANS.FAIL-
SAFE PROG" appears in the
Control*, there is a fault in the
ssion system.

e vehicle to a stop. Move the
ssion selector lever to "P." Set
ing brake and turn the engine
ion key to position 0).

ew seconds, then start the

dicator lamp goes out after a
onds, normal transmission per-
e has been restored. You may
e to drive as usual. If the indica-
does not go out, you can place
ctor lever in all positions. How-
e vehicle will now only drive for-
th limited gear selection.

appens, avoid extreme engine
nd consult the nearest autho-
MW center.

⚠ Do not work in the engine compartment when a drive gear (forward or reverse) is engaged. If you do this, the vehicle could move.◀

For jump-starting, towing and tow-starting, refer to pages 182 and 183.

ers retracted
rmittent wipe or rain sensor*
mal wiper speed
t wiper speed
f wipe
omatic windshield washer
omatic intensive-action washer*
ary dial for control of the wipe in-
al or the sensitivity of the rain
sor*

1 Intermittent wipe or rain sensor*

Intermittent wipe:
You can set the wipe interval to four stages with rotary dial 7.
In addition, the wipe interval is varied automatically depending on road speed.

Rain sensor:
When the rain sensor is activated, the windshield wiper is controlled automatically, depending on the degree of wetness of the windshield (in both snow and rain). You do not have to be concerned with switching the windshield wiper on or off or adjusting the wipe interval between intermittent and full wipe. Instead, you can concentrate fully on the traffic conditions. This is especially important under adverse weather conditions.
The rain sensor is positioned on the windshield, directly ahead of the interior rearview mirror.

To activate the rain sensor:
From ignition key position 1 and up, move the lever to position 1. The wipers travel once across the windshield, regardless of the weather.

wiper speed

ers automatically revert to nor-
ed when the vehicle is station-
on vehicles with rain sensor*).

matic windshield washer

tem sprays washer fluid against
dshield and activates the wipers
ef period.

nly pull the lever briefly, the sys-
ays washer fluid onto the wind-
ithout activating the wipers.

nsive automatic
ning unit*

tting 5. In addition, an intensive-
vasher fluid is first sprayed on
dshield.

nging the wiper blades, refer to
6.

Headlamp washers*

If they are on, the headlamps will also be cleaned every fifth time you activate the automatic windshield washer (intensive-action or standard wash/wipe).

Do not use the washers if there is any danger that the fluid will freeze on the windshield, otherwise vision could be obscured. For this reason, use an antifreeze agent. Refer to page 148.
Do not use the washers when the reservoir is empty, since this could cause damage to the washer pump.

Windshield washer jets

The windshield washer jets are warmed automatically when the ignition key is in position 2.

amming is cleared:

rox. 10 seconds after the lever is
ed in position 0 or
r the engine is switched off.

the rear window is opened, the
indow wiper is switched off. It
e switched on again after the
w has been closed.

anging the wiper blade, refer to
166.

To activate

Press the button: As long as the indicator lamp remains on, the rear window defroster continues at high-output (rapid thaw).

After the indicator lamp goes out, the defroster continues operating at reduced power for a limited period before deactivating automatically.

To deactivate

If the indicator lamp is on, press the button.

re and maintain speed
ccelerate

utton 1 briefly:
tem records and maintains the
vehicle speed. Every time you
button, the speed increases by
(1 km/h).

nd hold button 1:
icle accelerates without
e on the accelerator pedal.
ou release the button, the
registers and maintains the
speed.

on a downhill gradient, the
gine braking effect is not suffi-
e controlled speed can be
ed. Speed can drop on uphill
f the engine output is insuffi-

To decelerate

Press button 2 briefly:
When cruise control is active, every tap of the button reduces the speed by approx. 0.6 mph (1 km/h).

Press and hold button 2:
With the cruise control active, the system automatically reduces the throttle opening to slow the vehicle. When you release the button, the system registers and maintains the current speed.

sume the stored setting

button 3:
ehicle accelerates to and main-
he last speed stored. When you
e ignition key to position 0, the
speed is deleted from the sys-
memory and the system is deacti-

eactivate the system

the cruise control has been can-
press button 4 again. The indica-
np goes off and the memorized
is canceled.

Do not use cruise control on twisting roads, when high traffic density prevents driving at a constant speed, when the road surface is slick (snow, rain, ice), or when the road surface is loose (rocks or gravel, sand).◀

display

de temperature display

side temperature appears in the panel as soon as you turn the key to position 1.

change the units of measure by

ng and holding down the (arrow) with the ignition key ition 1
g the ignition key to 0.

so to page 88.

Ice warning

If the outside temperature drops to approx. +37.5 °F (+3 °C), a warning signal sounds and the display flashes briefly.

The warning is repeated whenever the temperature climbs to at least +43 °F (+6 °C) and then drops again to +37.5 °F (+3 °C).

The ice warning does not alter the fact that surface ice can form at temperatures above +37.5 °F (+3 °C), on bridges or shaded road surfaces, for instance.◀

rgy control

tes current fuel consumption in
n liters per 100 km on Canadian
es). This instrument shows
er your current driving style is
cive to fuel economy with mini-
exhaust emissions.

the vehicle is stationary, the dis-
oes to "Maximum" (zero on Cana-
nodels).

Fuel gauge

When you switch on the ignition, the indicator lamp comes on briefly to confirm that the system is operational.

If the indicator lamp stays on, there are approx.

- 2.1 gal (8 liters) – BMW 528i
- 2.6 gal (10 liters) – BMW 540i

remaining in the tank.

Tank capacity: Refer to page 203.

Certain operating conditions (such as those encountered in mountainous areas) may cause the needle to fluctuate slightly.

Please refuel early, since driving to the last drop of fuel can result in damage to the engine and/or catalytic converter.◀

en the blue and red zones

operating range. It is not un-
r the needle to rise as far as the
the red zone in response to
side temperatures or severe
g conditions.

g coolant level: Refer to
1.

Service Interval Display

The precise layout varies according to the individual model version.

Green lamps

The number of illuminated lamps decreases as the time for your next maintenance visit approaches.

Yellow lamp

This field appears together with OILSERVICE or INSPECTION.

Maintenance is due. Please contact your BMW center for an appointment.

Red lamp

The maintenance deadline has been passed.

anumeric display*

nessages are used to alert the to system malfunctions when the n key is turned to position 2. The s accompanied by a gong.

us report symbol

play

ECK button

ages concerning system faults are ntiated based on two priorities:

Priority 1

These defects are immediately indicated by a gong and a flashing warning symbol (1). Simultaneous defects will be displayed consecutively. These status reports remain in the display until the defects are corrected. It is not possible to delete them by pressing the CHECK button (3):

2

isplays appear for 20 seconds
e ignition key is turned to posi-
he warning symbols remain
e message disappears. You can
the messages again by pressing
ECK button (3):

KLID OPEN
age appears only when the
e is initially set in motion.
R OPEN
message appears after a minimal
ed road speed has been ex-
ed.
EN SEAT BELTS*
dition to this message, a
ng lamp with the safety belt icon
ars and an acoustical signal
s.
HER FLUID LOW
ow; top up fluid at the next
tunity. Refer to page 148.
CK ENGINE OIL LEV
ngine oil as soon as possible.
to page 149.
IDE TEMP. +20 °F (–5 °C)
isplay is only an example. The
nt temperature is displayed at
le temperatures of +37.5 °F
) and below. Refer also to
82.

▷ TIRE PRESSURE SET*
The RDC has imported the current inflation pressure in the tires as the target values which the system will monitor.
Refer to page 92.

▷ CHECK TIRE PRESSURE*
Check and correct the tire inflation pressure to specifications at the earliest opportunity (next stop for fuel).
Refer to page 92.

▷ TIRE CHECK INACTIVE*
A temporary interference of the RDC or a system fault. Refer to page 93.

▷ CHECK BRAKE LAMPS
A lamp has failed or the electrical circuit has a fault. Refer to pages 169 and 170 or consult an authorized BMW center.

▷ CHECK LOWBEAM LAMPS
CHECK SIDE LAMPS
CHECK REAR LAMPS
CHECK FRONT FOGLAMPS
CHECK LICPLATE LAMP
CHECK HIGHBEAM LAMP
CHECK BACK UP LAMPS
Defective bulb or circuit. Refer to page 167 or consult an authorized BMW center.

ays after completion of trip

he malfunctions registered during
p appear consecutively when the
turned to Position 0.

f the following displays may ap-

HTS ON
IN IGNITION LOCK
ECK ENGINE OIL LEV
engine oil at the next opportunity
t stop for fuel). Refer to page 149.

y appears when you open the
s door after parking the vehicle.
plementary gong is also heard.

s reports remain available for a pe-
f approx. three minutes after the
y goes out and the key is re-
d from the ignition. Press the
K button. If there were multiple
s, press the CHECK button re-
dly to view them all in sequence.

To check the Check Control

Press the CHECK button (3) with the ignition key in position 2:
CHECK CONTROL OK appears in the display.

No malfunctions are present in the monitored systems.

Onboard computer

You will find a description of the onboard computer in the "Radio and Information Systems" Owner's Manual.

You can have the Check Control and onboard computer messages displayed in a different language.◀

e temperature and e fuel consumption

change the units of measure for the outside temperature dis-

ng and holding the trip odome-set button (in ignition key posi-)

hen turning the ignition key to 0.

so to page 82.

Operating range and average speed

The computer bases its calculations of the cruising range on the rate of fuel consumption in the period immediately preceding your data request.

The computer ignores any time spent with the vehicle stationary and the engine off in its average speed calculations.

ard computer with
anumeric display*

r vehicle has Check Control with
numeric display, the system's on-
computer is described in the
o and information systems"
r's Manual.

tical signals

ance to the nearest object is in-
by a tone sounding at various
s. As the distance between vehi-
object decreases, the intervals
n the tones become shorter. A
ous tone indicates the presence
ject less than 1 ft. (30 cm)

ning signal will be canceled af-
ox. 3 seconds if the distance to
ruction remains constant during
e (if you are moving parallel to a
instance).

malfunctions will be indicated
ntinuous high-pitched tone
e system is activated the first
ease have the cause checked
rected by your authorized BMW

The PDC does not remove the driver's personal responsibility for evaluating the distance between the vehicle and any obstacles. Even when sensors are involved, there is a blind spot in which objects cannot be detected. This applies especially in those cases where the system approaches the physical limits of ultrasonic measurement, as occurs with tow bars and trailer couplings, and in the vicinity of thin and painted objects.
Certain sources of sound, such as a loud radio, could drown the PDC signal tone.◀

Keep the sensors clean and free of ice or snow in order to ensure that they continue to operate effectively. Do not apply high pressure spray to the sensors for a prolonged period of time. Maintain an adequate distance of more than approx. 4 inches (10 cm).◀

ator lamp

The indicator lamp in the instrument cluster goes out shortly after you switch on the ignition.
to page 24.

tor lamp flashes:
ystem is actively regulating drive
e in response to monitored vehicle
ting conditions.

ndicator lamp fails to go out after
gine is started, or if it comes on
normal driving:
system has not been deactivated,
is a system malfunction. The vehi-
mains operational, but without
T/DSC. Consult your authorized
center for repair.

eactivate the system

the button. The indicator lamp
me on.

nding on equipment options, the
is marked with ASC or DSC.

leactivated ASC+T/DSC you are
g with conventional, unregulated
e transfer.

We recommend that you deactivate the system for increased traction:

- When rocking the vehicle or starting off in deep snow or on loose surfaces
- When driving with snow chains. Refer also to page 131.

To reactivate the system

Press the button again; the indicator lamp goes out.

The laws of physics cannot be repealed, even with ASC+T/DSC. Any consequences arising from traction loss due to excessive vehicle speed remain the responsibility of the driver. We therefore urge you to avoid using the additional safety margin of the system as an excuse for taking risks.◀

For additional details concerning ASC+T/DSC, please refer to the chapter describing "Advanced technology" on page 189.

e the system

he ignition key to position 2 (do art the engine).

and hold the button (arrow) un- yellow indicator lamp in the in- ent cluster comes on for a few ds or the message "SET TIRE SURE" appears in the Check ol.

you have driven for a few min- the RDC will import the current on pressure in the tires as the values which the system will or.

only have to repeat this proce- he tire inflation pressure must ected. Otherwise, the RDC func- tomatically when the ignition position 2, and thus operates er the vehicle is driven.

Loss of tire pressure

If, after a certain period of time, the air pressure has gone down significantly (which is normal for any tire), the yellow indicator lamp comes on or the message "CHECK TIRE PRESSURE" appears in the Check Control.

This alerts you that you should have the tires inflated to the specified pressures as soon as possible.

If you are prompted to check the tire pressure shortly after a correction has been made, this indicates that the corrected values were not accurate. Please check the inflation pressure again and make corrections according to the inflation pressure table.◀

The RDC cannot alert you to se-
vere and sudden tire damage
d by external factors.◀

Have the tires changed by your
authorized BMW center.
BMW center has the information
d for working with RDC and is
ped with the necessary special
◀

System interference

During the period of the malfunction, the yellow indicator lamp comes on or the message "TIRE CONTROL INACTIVE" appears in the Check Control.

You will also see the same message

- in the event of a system fault
- if a wheel is mounted without the RDC electronics
- if, in addition to the spare tire, additional wheels with RDC electronics are on board.

Please contact your authorized BMW center for additional information.

ollow-me-home lighting:"
you actuate the headlamp
after you have parked the
and shut off the engine, the low
will remain on for a brief period.
y also have this function deacti-
you wish.◀

lamps*

tional details, refer to page 168.

S ON" warning

on key position 0, a buzzer
for a few seconds after the
door is opened if the head-
ave not been switched off.

cles with alphanumeric Check
:
inder is given through the
Control.

e-driving lamp*

dlamps are automatically
d on for daylight driving at
key position 2.

Instrument lighting

Turn the rotary dial to adjust the illumi-
nation intensity.

Fog lamps

Front fog lamps

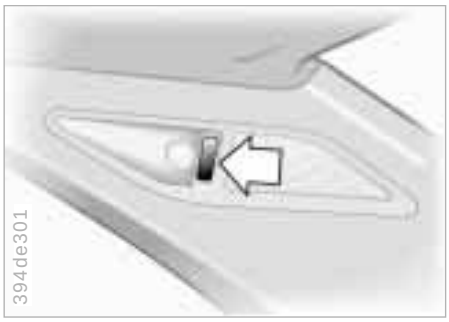
A green indicator lamp appears in the instrument cluster to indicate that the front fog lamps are on.

If the high beam is switched on, the fog lamps go out.

ell lamps

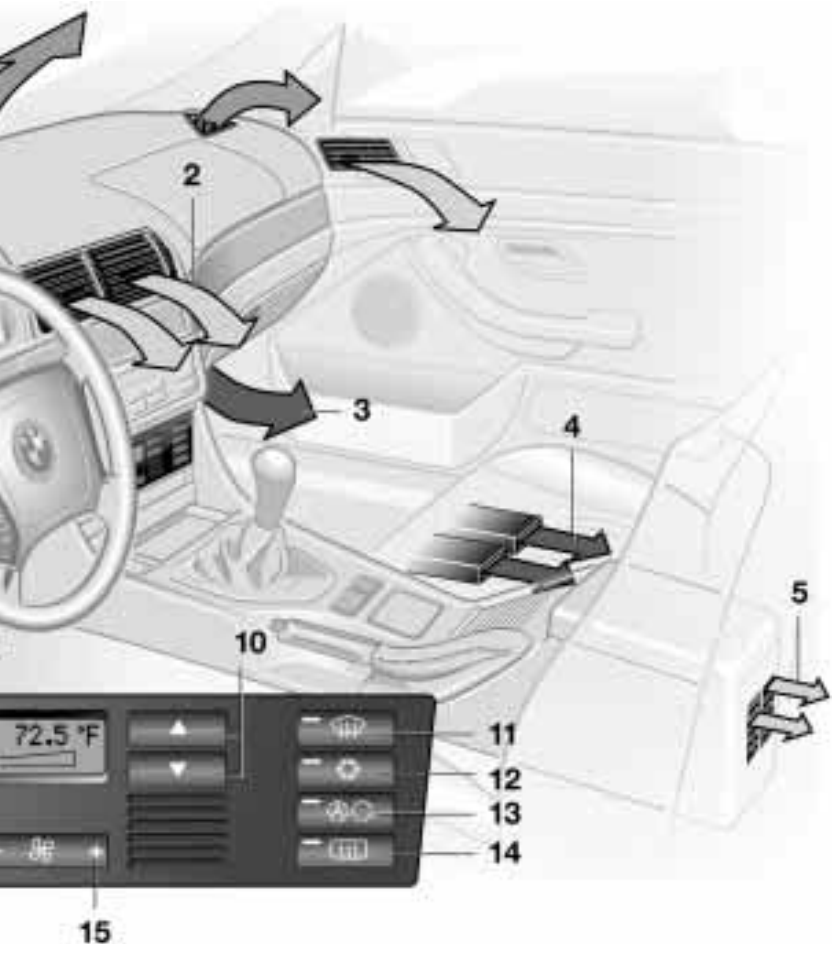
well lamps operate in the same
he interior lamps.

Reading lamps



The reading lamps are located in the front near the interior lamp. There are also reading lamps in the rear. They can be switched on and off with the switch (arrow) adjacent to each lamp.

In order to conserve the battery, all of the lamps in the vehicle are switched off automatically approx. 15 minutes after the ignition key is turned to position 0.◀


2
3
4
5
10
72.5 °F
11
12
13
14
15

mperature control –
ht-hand side 100
defrost windshield and door
ndows 101
r conditioner 101
tomatic recirculated air control
UC 101
ear window defroster 79, 102
r supply 101
sidual heat mode 102
r grill for interior temperature
nsor – please keep clear and
obstructed

atic air distribution

The AUTO program assumes the adjustment of the air dis- and the air supply for you and apts the temperature to external es (summer, winter) to meet nces you can specify. This pro- aintains a comfortable in-car cli- gardless of the season. Select or temperature that is pleasant - we recommend 72 °F (22 °C). ected temperature and AUTO for ow appear in the display 7. Re- e overview on page 98. Open ilation outlets for the upper witch on the air conditioner in eather. The maximum cooling is achieved when you set the al 3 (refer to page 102) to cold.

ual air distribution

You can cancel the AUTO pro- gram by selecting specific dis- tribution patterns to suit your own individual requirements. direct air to flow onto the win- , toward the upper body , the footwell .

Temperature

You can make individual temperature settings on the driver's side or the front passenger side. Your settings will be shown in the display 9. The displayed temperatures are reference values for the interior temperature. We recommend 72 °F (22 °C) as a comfortable setting, whether the air conditioner is operating or not.When you start the vehicle, the system ensures that the selected temperature is achieved as quickly as possible. It then maintains this temperature, regardless of the season.

Set the rotary dial 3 (refer to "Draft-free ventilation" on page 102) to a medium position to provide somewhat cooler air. This helps to promote driving without fatigue. Make use of this means of mixing air especially for making minor adjustments for personal comfort.

You can set uncontrolled heater output at up to 90 °F (32 °C). Full cooling output is available from the air conditioner down to 60 °F (16 °C).◀

onditioner

The air is cooled and dehumidified and – depending on mperature setting – warmed again the air conditioner system is ned on. Depending on the er, the windshield may fog over when the engine is started. e button to switch off the air conr at outside temperatures below x. +41 °F (+5 °C). This will help to nt the windows from fogging up. windows fog over after switching conditioner off, switch it back on.

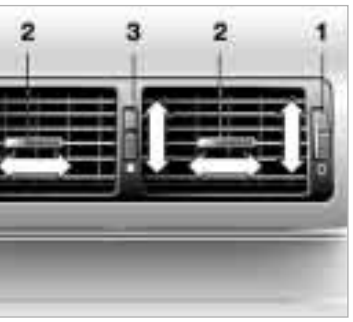
Condensation forms in the air conditioner system during operation, then exits under the vehicle. s of condensed water of this kind us normal.◀

Automatic recirculated-air control (AUC)

You can respond to unpleasant external odors by temporarily stopping the flow of outside air. The system then recirculates the air currently within the vehicle. Press the button repeatedly to run through the following control sequence:

- Indicator lamps off: Outside air flow operational.
- Left-hand indicator lamp on – AUC mode: The system recognizes pollutants in the outside air and blocks the flow of air when necessary. The system then recirculates the air currently within the vehicle.
  Depending on the air quality, the automatic system then switches back and forth between outside air supply and recirculation of the air within the vehicle.
- Right-hand indicator lamp on: The flow of external air into the vehicle is permanently blocked. The system then recirculates the air currently within the vehicle.

If you have a multifunction steering wheel with the recirculated-air button (refer to page 25), you can also use it to switch between "Off" and the recirculated-air mode or AUC and the recirculated-air mode.



ree ventilation

adjust the blower controls for
er body area to select the opti-
flow rates and directions for
rsonal requirements:

ary dial 1 to open and close the
hrough an infinitely-variable
ou can also use the levers 2 to
the direction of the airflow.

outlets so that the air flows past
does not flow directly on you.

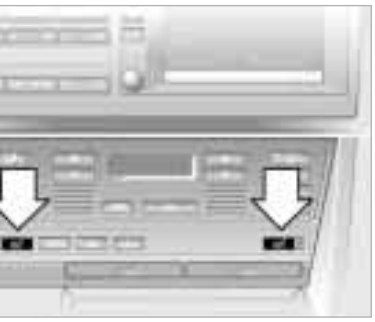
ial 3 allows you to temper the
from these outlets by adding
cooling as desired:
ward blue – colder
ward red – warmer

Rear passenger area ventilation

Rotary dial 1 opens the outlets in an infinitely-variable range. You can vary the temperature of the air as it flows out using rotary dial 3 in the same manner as for the front rotary dial.

You can change the direction of the air flow with levers 2.

t heating*



eat cushion and backrest can
ated with the ignition key in posi-

an call up different heating modes
eatedly pressing the keys.

ghest heating mode is on when
ee indicator lamps are lit; one
s lit for lowest heating. Tempera-
egulation in each mode is with a
ostat.

an also switch the higher heating
s off directly:
the key and hold it slightly longer.

Steering wheel heating* 103

To activate and cancel the steering wheel heater, press the button (arrow) with the ignition key in position 2.

The lamp within the button lights up when the steering wheel heater is in operation.

If you have a multifunction steering wheel without steering wheel heating, the button for the recirculated-air mode is in this location (refer to page 25).

pendent ventilation system*

tem allows you to ventilate the and lower its temperature, using wer of the automatic climate

ependent ventilation system is d via the multi-information dis- D or the onboard computer. Re- e separate Owner's Manual.

set two different times for the to start; it will remain active for tes. You can also turn it on and tly. Since the system uses a tial amount of electrical current, uld not activate it twice in suc- without allowing the battery to arged in normal operation n use.

When a preselected activation time is set, the independent ventilation system is operational at outside temperatures above 60 °F (16 °C), or by direct switch activation. It cannot be switched on when the vehicle is moving.

The air emerges via the vent outlets for the upper body. Therefore, the vents must be open for the system to operate.

To Canadian residents:
During programming, your hand-
ransmitter may automatically stop
nitting after two seconds. This
ot be long enough to program the
Universal Transmitter. If you are
amming from one of these hand-
ransmitters, the Universal Trans-
s lamp may begin to flash in a se-
double flashes. If this occurs,
ue to hold the button on the Uni-
Transmitter while you reactivate
and-held transmitter. You may
o repeat this function several
while programming.◀

Before programming, read the
User's information" section on
107.◀

original hand-held transmitter

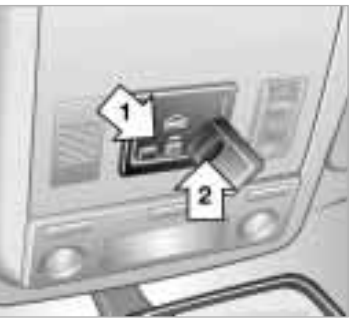
If this symbol is depicted on the packaging or in the user's instructions for the original hand-
ransmitter, it may be assumed
is original hand-held transmitter
patible with the BMW Universal
mitter.

Checking for the change code

In order to determine whether the original hand-held transmitter is equipped with a change code system, you may either refer to the instructions for the original hand-held transmitter or program a channel key as described in the left column on page 106 under "Programming."

Following that, press and hold the programmed channel key of the BMW Universal Transmitter. If the indicator lamp of the BMW Universal Transmitter flashes rapidly for two seconds and then stays on continuously, the original hand-held transmitter is equipped with a change code system. If the change code system is available, program the channel keys as described in the right-hand column on page 106 under "Programming a hand-held transmitter with change code."

If you have additional questions, please consult your BMW center or call 1-800-355-3515.◀



he original hand-held transmit-
ward the receiver (3) a maximum
nches (5 cm) away.
taneously press the transmitting
the original hand-held trans-
(arrow 2) and the desired chan-
y of the BMW Universal Trans-
(arrow 1). Release both keys as
as the indicator lamp flashes
y.
ogram other original hand-held
mitters, repeat steps 3 and 4.
esponding channel key is now
med with the signal of the orig-
d-held transmitter.

Programming a hand-held transmitter with change code

Read and comply with the safety precautions on page 105.◀

Consult the operating instructions for the individual device when programming the BMW Universal Transmitter. Read and comply with the following programming instructions for the use of the BMW Universal Transmitter with a change code system:

A second person simplifies programming of the BMW Universal Transmitter.◀

ring the channel keys

Read and comply with the safety precautions on page 105.◀

dual channel keys cannot be d. However, the three channel can be cleared together in the fol- manner:

ss and hold the two outer channel s of the BMW Universal Transmit- until the indicator lamp flashes, then release the keys.

annel keys are cleared.

User's information

Do not use this BMW Universal Transmitter with any garage door opener that lacks safety "stop" and "reverse" features as required by federal safety standards (this includes any garage door opener model manufactured before April 1, 1982).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

prevent injury in the event of an cident, close the glove com- t immediately after use.◀

rgeable flashlight*

on the left-hand side of the ompartment.
s integral overload-protection, be left in its holder continu-

sure that the flashlight is itched off when it is inserted older. Failure to comply with caution could lead to overcharg- damage.◀

Storage facilities

The cover of the storage compartment on the vertical surface of the center console can be pushed open or closed (illustration). If your vehicle is equipped with a cassette holder*, open each cassette compartment by pressing on the small button.

Storage compartment on the center console between the front seats: To open, reach into the recess at the front and pull upward.

You will find a coin holder in the door pocket on the driver's side.

You will find additional storage compartments in all of the doors as well as on the backrests of the front seats.

erage holder*

olders for canned drinks have
provided in the center console be-
e controls for the automatic cli-
control, with two additional hold-
r rear passengers on the rear of
nsole, just below the vent outlets.

to open; fold back inward to

pty

e lid and press down (arrow):
now pull the ashtray upward
oval.

cles equipped for non-
, the insert is removed in
e way.

Cigarette lighter*

Press the cover panel for access (arrow), then push the lighter down.

Remove as soon as the lighter jumps back out.

Hold or touch the hot cigarette lighter by the knob only. Holding or touching it in other areas could result in burns.
The cigarette lighter remains operational when the ignition key has been removed. Therefore, do not leave unsupervised children in the vehicle.◀

tray, rear

en

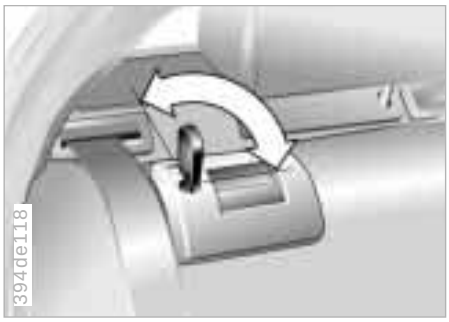
the recess in the lid.

mpty

the edge of the cover (arrow).
an now pull the ashtray upward
moval.

tral belt has an additional small

connect the two belt sections, an use the central belt as any al 3-point belt asier to fold the rear seat back- p and down if you unbuckle the arrow).



With a master key, you can lock each backrest in the rear seat.

This also prevents access to the luggage compartment from the interior of the vehicle when you turn over the door and ignition key 3 to someone else (refer to page 34), for valet parking for instance.

oving the center armrest

or vehicles with the through-load-stem and for the sport wagon.
to page 115)

d the center armrest completely ward.

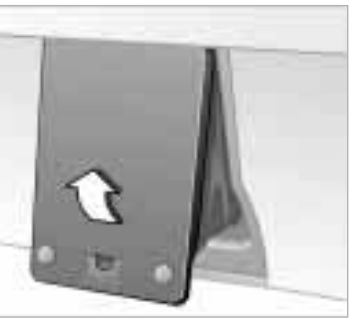
sen the trim from the upper cro® fastener and place it on the rest.

sp the front of the armrest with hand, then use your other hand each down behind the armrest pull up sharply (arrow).

Installing the center armrest

Guide the armrest into position from above, then apply pressure until you hear it snap into position.

When removing and installing the center armrest, be sure that the seat covers are not damaged by the side pins.◀



he magnetic retainers to attach over panel to the upper surface surface below rear tray) of the ge compartment.

ensure that the skis are clean oading them into the bag. Take avoid damage from sharp

Secure the bag's contents by tightening down the strap at the buckle.◀

To store the ski bag, perform the above steps in reverse sequence.

e sport wagon

d the center armrest outward.
sen the trim from the upper
cro® fastener and place it on the
rest.
ss button 1 downward and swing
cover forward.
ss button 2: The cover in the lug-
e compartment is unlocked.

agon

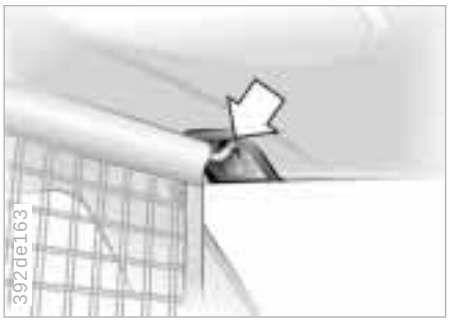
cover

roll-up cover out and hook it rear bracket.

er will support light objects items of clothing.

not place heavy or bulky jects on the roll-up cover. They ose a danger to vehicle nts during braking or evasive ers.
allow the cover to snap back, is could damage it.◀

ing the case, refer to the next

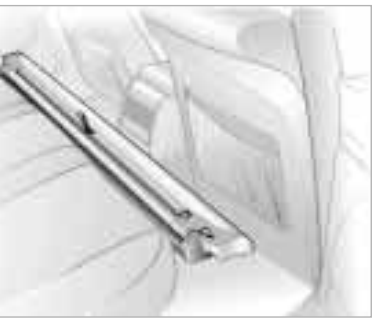


Separation net*

Pull the separation net out with the straps. Hold the bar on both sides and insert it into the holders. It is easiest to do this from the back seat.

Do not allow the separation net to snap back. Doing so could pose a risk of injury and the separation net could be damaged.◀

When the rear backrests are folded down, you can store the case in front of the rear seats, pull the separation net out from there and insert it in the front holders (refer to the next page).

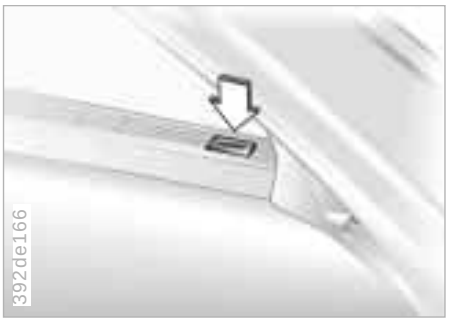


ge

are holders for the case in front of
ar seats.

the case in from the side as
in the illustration. The strap of
paration net must be directed up-
while the end of the roll-up cover
be laid around and under the case
rear.

an pull the separation net out and
it in the holders above it in the
roof area.



Side covers

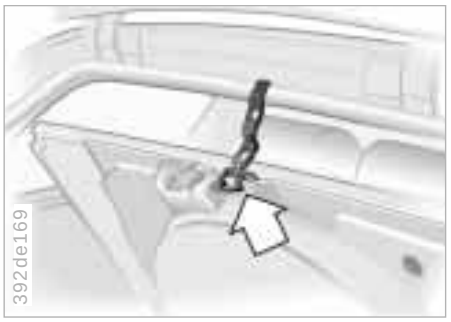
Open the side covers by pressing the button.

agon

e floor cover up

he black retainer on the lower he panel and hook it into the ame of the tailgate cutout.

ou fold the floor cover down, e retainer to its original posi-



Raise the spare tire cover

Lift up the cover and hook it into the red retainer on the floor panel (arrow).

Before you fold the cover down, return the retainer to its original position.

wagon

ng the load

e smaller, light pieces with the
ng straps or a luggage net*, or
astic straps (refer to page 44)
rge, heavy pieces, visit your
center for load-securing de-
. Lashing eyes are provided at
rners of the luggage compart-
for attaching these load-secur-
vices (the illustration shows the
wagon)
ly with the information en-
d with the load-securing de-

Always position and secure the load correctly, otherwise it can endanger the passengers during braking or evasive maneuvers.
Do not exceed the permissible gross vehicle weight and the permissible axle loads (refer to page 201). If you do, the operating safety of the vehicle is no longer ensured and you are in violation of the law.
Do not carry hard or heavy objects unsecured in the passenger compartment. If you do so, they may be projected through the air during braking and evasive maneuvers, thus endangering vehicle occupants.◀

hould therefore always remember
exceed the approved roof weight,
proved gross vehicle weight or
le weights when loading the rack.
ill find the specifications under
nical data" on page 201.

sure that the load is not too
, and attempt to distribute it
. Always load the heaviest pieces
n the bottom). Be sure that
ate clearance is maintained for
the sliding/tilt sunroof, and that
s do not project into the opening
f the luggage compartment lid/
e.

e the roof luggage correctly and
to prevent it from shifting or be-
st during driving (danger to follow-
ffic).

smoothly. Avoid sudden accelera-
nd braking maneuvers. Take cor-
ently.

oof load increases aerodynamic
ance: Increased fuel consumption
ress on the roof are the immedi-
sults.

der the hood:
od 143
gine compartment 144
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Overview

Controls and features

Operation, care and maintenance

Owner service procedures

Advanced technology

Technical data

Index

echnical factors associated
ir manufacture, tires do not
their full traction potential until
break-in period has elapsed
reason, drive with extra care
he initial 200 miles (300 km).

ur local and state maximum
mits.

hen the vehicle is operated on
t or slushy roads, a wedge of
ay form between the tire and
surface. This phenomenon is
to as aquaplaning, or hydro-
and can lead to partial or com-
s of traction, vehicle control
king effectiveness. Reduce your
n wet roads.◄

Brake system

Approximately 300 miles (500 km) must elapse before the brake pads and rotors achieve the optimal pad-surface and wear patterns required for trouble-free operation and long service life later on.

To break in the separate parking brake drums, apply the parking brake lightly when coasting to a standstill (at a traffic signal, for instance), provided that traffic conditions allow you to do so. To avoid corrosion, repeat this procedure from time to time.

The brake lamps do not come on when the parking brake is applied. Vacuum for the brake system servo unit on your BMW is available only when the engine is running. When you move the car with the engine shut off – when towing, for instance – substantially higher levels of pedal force will be required to brake the vehicle.◄

parcel tray:
t use the rear parcel tray to store
or bulky objects. They could
a danger to the occupants during
g, evasive maneuvers, or in a

es hooks:
items of clothing from the hooks
t they will not obstruct the driver's
. In order to avoid personal
s during braking or evasive
uvers, do not hang heavy objects
e hooks.◀

other situations in which the not burned, or burns incom-
y, such as engaging the starter ently or for extended periods, or ted start attempts in which the e does not start (stopping and ting an engine which is running rly does not present a problem). let the engine run with any of park plug cables disconnected.

Be sure to comply with the instructions above to prevent unburned fuel from reaching the catalytic converter. Otherwise there is danger of overheating and damage to the catalytic converter.
Extreme temperatures occur at the catalytic converter on this and every catalyst-equipped vehicle. Heat shields are installed adjacent to some sections of the exhaust system. Never remove these shields; do not apply undercoating to their surfaces. When driving, standing at idle, and parking the vehicle, take care to avoid contact between the exhaust system and flammable materials (grass, hay, leaves, etc.). Such contact could lead to a fire, resulting in personal injury and property damage.◀

ng with ABS

ystem becomes operative once hicle exceeds a speed of approx. (10 km/h). The ABS is deacti- whenever the vehicle's speed back below approx. 4 mph h). This means that the wheels ck in the final phase of a brake ation – a factor of no significance ual use.

are in a situation which requires aking, you will exploit the full ben- f the ABS system if you apply num brake pressure ("panic stop"). the vehicle maintains steering re- iveness, you can avoid possible cles with a minimum of steering despite the full brake application.

BS system closed-loop control cycles in fractions of a second. ation at the brake pedal indicates driver that ABS is active, that is, he vehicle is within its maximum g range. In addition, the audible ion that accompanies the control tion calls the attention of the to the reduced traction between es and the road surface (slippery urface), and serves as a reminder he speed of the car should be re- to adapt to road conditions.

On road surfaces which have a loose layer on a firm base (on gravel or snow, for instance), the braking distances with ABS may be longer than with the wheels locked. The same applies when snow chains have been mounted. However, ABS continues to provide enhanced vehicle stability and steering response under these conditions.

event of a fault

f the ABS warning lamp in the nstrument cluster comes on, efer to page 23. The brake system then reverts to conven- ional operation as on vehicles without ABS. However, have the ystem checked by your BMW s soon as possible. To prevent ted defects and cumulative om adversely affecting the brake refer any problems to your ed BMW center at the earliest nity.

Disc brakes

Disc brakes furnish optimum deceleration and braking control and greater fade resistance under heavy use.

When the vehicle is driven only occasionally, during extended periods when the vehicle is not used at all, and in operating conditions where brake applications are less frequent, there is an increased tendency for corrosion of the rotors and accumulation of contamination on the brake pads. This occurs because the minimal pressure which must be exerted by the pads during brake applications to clean the rotors is not reached.

If the brake rotors are corroded, they will tend to respond to braking with a pulsating effect which even extended application will fail to cure.

For your own safety: Use only brake pads that BMW has approved for your specific vehicle model. BMW cannot evaluate non-approved brake pads to determine if they are suited for use, and therefore cannot ensure the operating safety of the vehicle if they are installed.◀

d engine braking prove inade-
, you should still avoid extended,
uous braking. Instead of main-
g low to moderate pressure over
ended period of time, you should
erate by applying more substantial
ure to the brake pedal (watch for
ing traffic!), then releasing the
then repeating the application.
taggered braking technique al-
he brakes to cool in the intervals
en active braking phases, pre-
g overheating and ensuring that
aking capacity remains available
imes.

Do not coast with the clutch de-
pressed or with the transmission
ector lever in neutral. Do not coast
he engine shut off. The engine
es no braking effect when the
is depressed or the transmission
eutral, and there is no power-as-
r braking or steering when the
e is not running.
allow floor mats, carpets or any
objects to protrude into the area
d the accelerator, clutch and
pedals and obstruct their move-
◀

Dynamic Brake Control (DBC)*

If you apply the brakes rapidly, this system automatically produces the maximum braking force boost and thus helps to achieve the shortest possible braking distance during "panic stops." All of the benefits of the ABS system are exploited under these circumstances.

Do not reduce the pressure on the brake pedal for the duration of the brake application. When the brake pedal is released, the DBC is deactivated.

In the event of a malfunction, the yellow warning lamp comes on. Conventional braking efficiency is available without limitations.
Have the system checked and repaired at your BMW center as soon as possible.

For "Information for your safety" covering the ABS system, refer to page 128. This information also generally applies for DBC.◀

pads

The warning lamp for the brake pads comes on, or the "CHECK BRAKE PADS" message appears in the Check Control:

ke pads have reached their
n pad thickness. Proceed to the
authorized BMW center as
possible to have the pads
d.

r your own safety: Use only
ake pads that BMW has
d for your specific vehicle
BMW cannot evaluate non-
d brake pads to determine if
suited for use, and therefore
ensure the operating safety of
cle if they are installed.◀

Winter operation

The onset of winter is often accompanied by rapid changes in weather. Adaptations in driving style should be accompanied by preparations on the vehicle itself to ensure that your vehicle operation through the winter remains safe and trouble-free.

Coolant

Ensure that the coolant mixture contains the year-round ratio of 50:50 of water and antifreeze/corrosion protection. This mixture provides protection against freezing down to approx. -34 °F (-37 °C). Replace the coolant every four years.

Locks

BMW door lock deicer can be used to free the locks if they are frozen. This deicer also contains lubricant.
After using deicer, treatment with BMW lock barrel grease is recommended.

on low-traction road es

ooth, gentle pressure to control elerator pedal. Avoid excessive speeds and shift to the next ear at an early point. Adapt eed and driving style when ap- ng grades or slopes. Maintain uate distance between yourself car ahead.

oad conditions substantially the amount of traction available n the tires and the road surface. ulting increases in braking dis- e considerable and should be mind at all times.

ntended to prevent the wheels king during brake applications, ping to maintain vehicle stability ering response.

If the ABS does not respond in a critical braking situation and the wheels lock:
Reduce the pressure on the brake pedal until the wheels just start to roll again while still maintaining enough force to continue braking.
Following that, increase pedal pressure again. Reduce the pressure as the wheels lock, then reapply pressure. Repeat this procedure. This type of staggered braking will reduce the braking distance, and the vehicle still remains responsive to steering.
You can then attempt to steer around hazards after you have reduced pressure on the brake pedal.

Do not shift down on slick road surfaces. Doing so could cause the rear wheels to lose traction and skid, which could result in the loss of vehicle control.◀

Depress the clutch during hard braking on road surfaces which provide only poor or uneven traction.◀

er steering

s a change in steering behavior,
nce greater steering effort or if
becomes lighter as speed
es in vehicles equipped with
onic*:
your BMW center immediately
spection.

he power steering fails,
creased effort will be required
the vehicle.◀

Level control system*

The warning lamp for the level control system comes on, or the message "LEVEL CONTROL INACTIVE" appears in the Check Control: There is a malfunction in the level control system.

Stop and inspect the vehicle. If it is riding significantly lower in the rear than in the front, or if it is sitting at an incline (left rear compared to right rear), consult the nearest authorized BMW center. Drive with appropriate caution in the meantime. The vehicle has reduced ground clearance or driving comfort is noticeably reduced.

Even if the attitude of the vehicle is normal, you should consult the nearest authorized BMW center if the warning lamp indicates a system fault.

io reception

ception and sound quality
ed from mobile radios varies
ding to a variety of factors, includ-
e broadcast range of the transmit-
d the directional orientation of the
na. Interference factors such as
ension power lines, buildings and
l obstructions can all lead to
idable reception interference,
lless of how well the vehicle
system is operating.
tic factors such as intense solar
on, fog, rain and snow can also
re with reception.

ar phones without official BMW
val can also generate interfer-
This phenomenon assumes the
f a low-pitched hum emanating
he speaker system.

e refer to the (Supplementary)
r's Manual provided with your
system for detailed information
use.

condition

ead – tire damage

your tires frequently for tread
gns of damage and for foreign
lodged in the tread. Check the
pth.

epth should not be allowed to
w 0.12 in (3 mm), even though
lly specified minimum tread
only 0.063 in (1.6 mm). At a
pth of 0.063 in (1.6 mm), tread
dicators (arrow) in the tread-
base indicate that the legally-
ible wear limit has been
. Below 0.12 in (3 mm) tread
here is an increased risk of
ning, even at relatively moder-
eds and with only small amounts
on the road.

Do not drive on a deflated (flat) tire. A flat tire greatly impairs steering and braking response, and can lead to complete loss of control over the vehicle.

Avoid overloading the vehicle so that the permitted load on the tires is not exceeded. Overloading can lead to overheating and increases the rate at which damage develops inside the tires. The ultimate result can assume the form of a sudden air loss.

Unusual vibrations encountered during normal vehicle operation can indicate tire failure or some other vehicle defect, as can variations in normal vehicle response, such as a pronounced tendency to pull to the left or right. Should this occur, respond by immediately reducing your speed and carefully proceeding to the nearest BMW center or professional tire center, or having the vehicle towed in to have it and its tires inspected.

Tire damage (up to and including blowouts) can endanger the lives of both the vehicle occupants and other road users.◀

ion

action grades, from highest to
t, are AA, A, B and C.
grades represent the tire's ability
p on wet pavement as measured
controlled conditions on speci-
overnment test surfaces of as-
and concrete. A tire marked C
ave poor traction performance.

The traction grade assigned to this
ire is based on straight-ahead
g traction tests, and does not
e acceleration, cornering, hydro-
g, or peak traction characteri-
◀

Temperature

The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.
Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.◀

e

e on which the tire was manu-
is indicated by the code on the
:
129 indicates that the tire was
ctured in Week 12 of 1999.

commends the replacement of
when the tires are no more than
old, even if a tire life of 10 years
ble.

res over 6 years old should be
ly in case of emergency. Such a
uld be replaced by a new tire
ately, and should not be
d together with new tires.

Tire rotation

Between the axles

The tread wear patterns at the front end differ from those at the rear – the actual patterns will vary according to individual driving conditions. In the interests of safety and maintaining optimal handling characteristics, interaxle tire rotation is not recommended.

If a proposed interaxle rotation of tires is based on economic considerations, one should consider whether the costs for the rotation are likely to be recaptured by any increase in the service life of the tires which might be realized. In principle, interaxle tire rotation should be performed at short intervals, with a maximum of 3,000 miles (5,000 km). Consult your authorized BMW center for more information.

ight choice

nly tires approved by BMW.
to the information beginning on
140.

se of the high speeds this vehicle
ach, the use of specific tire
s, specifications and dimensions
ndatory. Consult any BMW center
tails.
ly with national, state, or province
tions.

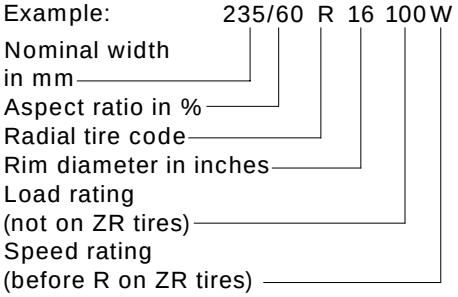
The correct wheel-tire combina-
ion affects different systems such
S, ATC, ASC+T/DSC. The func-
f these systems is impaired if im-
r wheel-tire combinations are

is reason, use only tires of the
brand and tread pattern. In the
of a flat tire if you have mounted
tires, for example, remount the
ved wheel-tire combination as
as possible.◀

Codes on tires and wheels

The tire codes will aid you in selecting the correct tire.

Codes on radial tires:


Example:
235/60 R 16 100 W
Nominal width in mm
Aspect ratio in %
Radial tire code
Rim diameter in inches
Load rating (not on ZR tires)
Speed rating (before R on ZR tires)

The speed rating indicates the approved maximum speed for the tire.

Summer tires:

S = up to 112 mph (180 km/h)
T = up to 118 mph (190 km/h)
H = up to 130 mph (210 km/h)
V = up to 150 mph (240 km/h)
W = up to 167 mph (270 km/h)
Y = up to 186 mph (300 km/h)
ZR= over 150 mph (240 km/h)

Winter tires

Choosing the right tire

BMW recommends winter tires (M+S radial tires) for driving in adverse winter road conditions. While tires known as all-season tires (M+S designation) provide better winter traction than summer tires with load ratings H, V, W, Y and ZR, they generally do not achieve the performance of winter tires.

In the interests of safe tracking and steering response, install radial tires made by the same manufacturer and with the same tread configuration on all four wheels if you elect to mount winter tires.

Mount only winter tires which have been approved by BMW. Any BMW center will be glad to provide you with information for selecting the best winter tires for your particular driving conditions.

ge

tires in a cool, dry place, away
ght whenever possible. Protect
es against contact with oil, grease
el.

Snow chains*

Use narrow-link BMW snow chains on summer or winter tires only in pairs and only on the rear wheels. Comply with all manufacturer's safety precautions when mounting the chains.

It is not possible to mount snow chains on tires with 17-inch wheels.◀

cations – sedan

eel rim heel rim)	Light-alloy wheel
–	7Jx15
–	7Jx15
–	7Jx16
–	8Jx17
–	8Jx17
–	9Jx17
–	6.5Jx15
–	7Jx15
–	7Jx16
–	8Jx17

The use of rims and wheel bolts that do not meet the specifications of the original factory-installed equipment will affect the safe operation of your vehicle and may cause an accident and personal injury.
Never mix tires of different design, such as steel-belted radials with radial bias-belted or bias-ply tires, etc. Mixing tire types will adversely affect roadholding and can lead to loss of vehicle control.◀

fications – sedan

Steel rim wheel rim)	Light-alloy wheel
–	7Jx16
–	7Jx16
–	8Jx17
–	8Jx17
–	9Jx17
–	7Jx16
–	8Jx17

The use of rims and wheel bolts that do not meet the specifications of the original factory-installed equipment will affect the safe operation of your vehicle and may cause an accident and personal injury.
Never mix tires of different design, such as steel-belted radials with radial bias-belted or bias-ply tires, etc. Mixing tire types will adversely affect roadholding and can lead to loss of vehicle control.◀

cations – sport wagon

eel rim heel rim)	Light-alloy wheel
–	7Jx15
–	7Jx15
–	7Jx16
–	8Jx17
7Jx15	7Jx15
–	7Jx16
–	8Jx17
–	7Jx16
–	7Jx16
–	8Jx17
–	7Jx16
–	8Jx17

Pay attention to the specifications for tires and wheels in the vehicle's manuals. If sizes not approved by the manufacturer are mounted, an entry in the vehicle's documents may be necessary. Comply with local legislation.

Snow chains*

For tires on 17-inch wheels, it is not possible to mount snow chains.

The use of rims and wheel bolts that do not meet the specifications of the original factory-installed equipment will affect the safe operation of your vehicle and may cause an accident and personal injury.
Never mix tires of different design, such as steel-belted radials with radial bias-belted or bias-ply tires, etc. Mixing tire types will adversely affect roadholding and can lead to loss of vehicle control.◀

pen

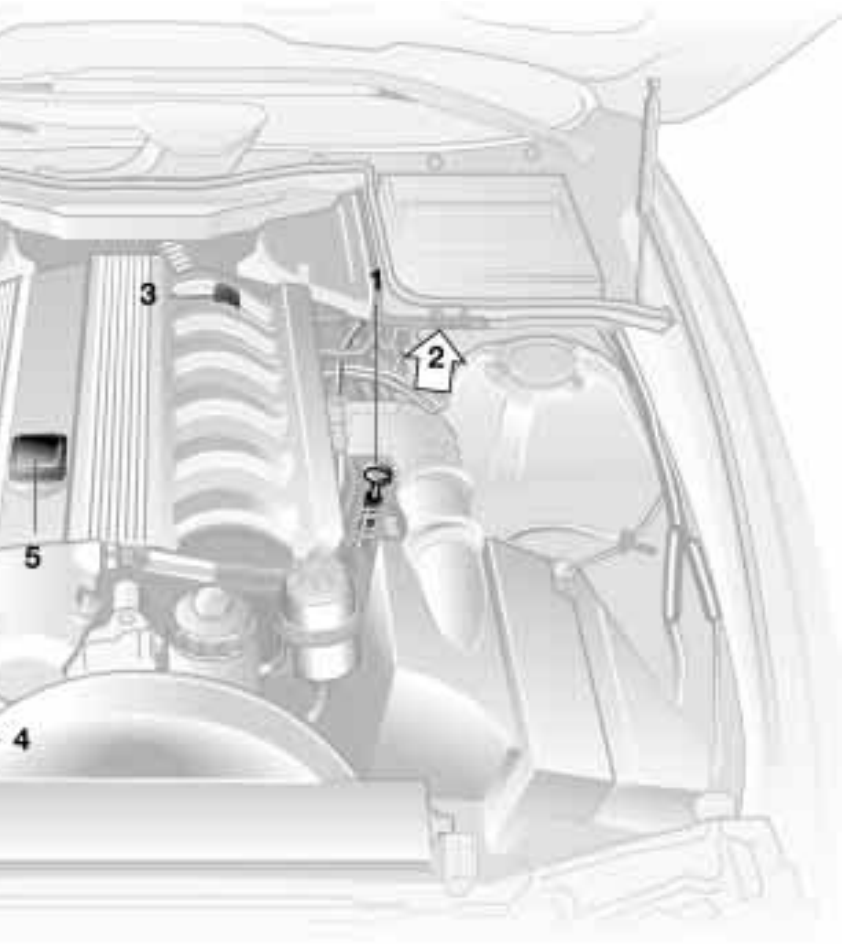
e release handle and open the

To close

Allow the hood to fall from a height of about 12 inches (30 cm) so that it audibly engages.

To avoid injuries, be sure that the travel path of the hood is clear when it is closed, as with all closing procedures.
If it is determined that the hood is not completely closed while driving, stop immediately and close it securely.◀

3i



i

ve-action washer
oir*

y approx. 1.1 US quarts
).
intensive-action washer fluid.
s freezing to approx. -17 °F
and is available from your
ed BMW center.

tifreeze agents or intensive-
tion washer fluids for the
systems are highly flammable.
reason, keep them away from
of flame and store them only in
ginal containers. Store them so
y are inaccessible to children.
with the instructions on the
ers.◀

Washer nozzles

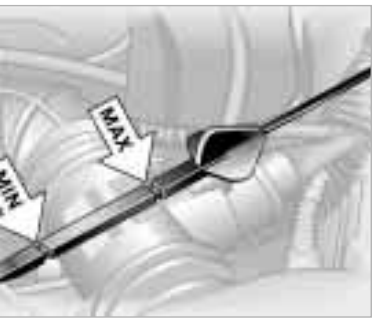
Windshield washer

Windshield:
The spray from the nozzles should be directed so as to ensure effective cleaning, even at high speeds. Use a needle to adjust the nozzles as required, or have them adjusted at your authorized BMW center.

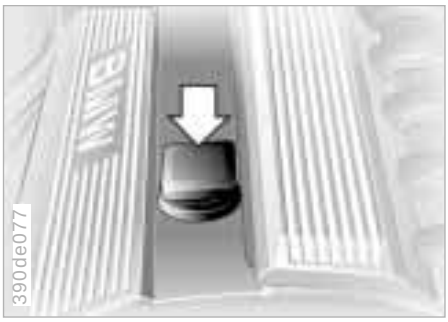
Rear window:
Have this system adjusted by your BMW center as required.

Headlamp washer system

Have the nozzles adjusted by your BMW center as required.



l volume between the two marks
e dipstick corresponds to approx.
S quarts (1 liter). Do not fill beyond
pper mark on the dipstick. Excess
damage the engine.



To add oil

Wait until the level has dropped to just above the lower mark before adding oil. However, do not wait until the oil level drops below the lower mark.

BMW engines are designed to operate without oil additives; the use of additives could lead to damage in some cases. This is also true for the manual transmission, the automatic transmission, the differential, and the power steering system.◀

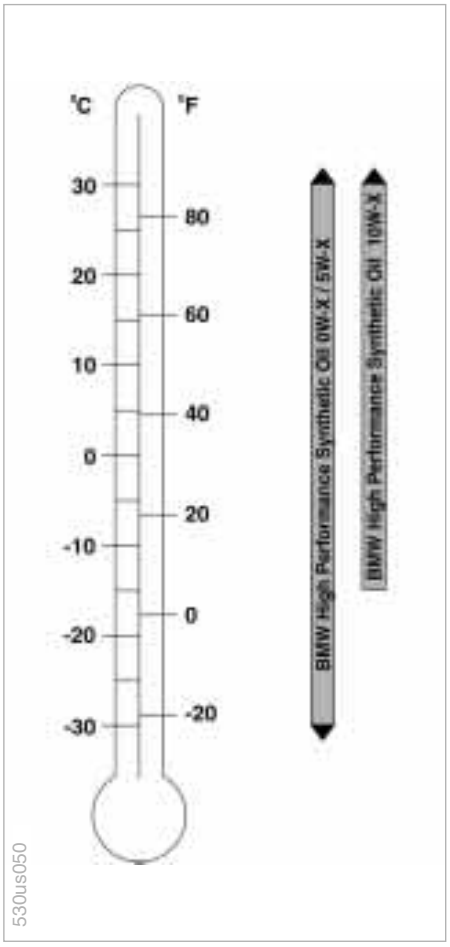
ity ratings

y is the oil flow rating as estab-
SAE classes.

ection of the correct SAE class
s on the climatic conditions in
where you typically drive your

proved oils are in SAE classes
-30 and SAE 5W-40.◀

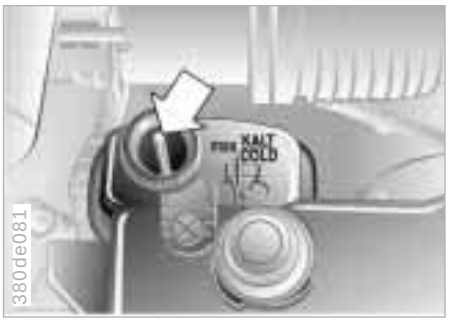
ils may be used for driving in all
temperatures.



Do not add coolant to the cooling system when the engine is hot. If tempt to do so, escaping coolant ause burns.
oid the possibility of damage later ver use anything other than fac- pproved, nitrite and amino-free ded-duty antifreeze with corrosion or. Your authorized BMW center iliar with the official specifica-

eeze and anticorrosion agents are dous to health. You should always them in their original container a location which is inaccessible dren.
ded-duty antifreeze with corrosion or contains the flammable sub- e ethylene glycol. For this reason, t spill antifreeze with corrosion in- on hot engine parts. It could fire and cause serious burns.◀

Comply with the applicable envi- onmental laws regulating the dis- of extended-duty antifreeze with sion inhibitor.◀



Checking coolant level

Correct coolant level when the engine is cold (approx. 68 °F / 20 °C):

Unscrew the cap from the expansion tank.

The coolant level is correct when the end of the red float is aligned with the upper edge of the filler opening (refer to the arrow in the illustration), or max. 0.8 in (2 cm) higher, for instance up to the mark on the float (see also the schematic diagram next to the cap).

e fluid

f the indicator lamp for the brake hydraulic system appears or if the "CHECK BRAKE FLUID" warning appears in the Check Control: The brake fluid level is too low in the reservoir.

ke fluid reservoir is located e microfilter housing on the side of the car. Should you de- that the brake fluid is low, refer blem to your BMW center, who e and rectify any sources of when refilling the reservoir. MW center is familiar with the ations for approved brake fluids

uid loss results in extended avel. For this situation, refer to s on page 130.

Brake fluid is hygroscopic, that is, it absorbs moisture from the air over time.
In order to ensure the safety and reliability of the brake system, have the brake fluid changed every two years by an authorized BMW center. Refer also to the Service and Warranty Information Booklet (US models) or to the Warranty and Service Guide Booklet (Canadian models).
Brake fluid is toxic and damages the vehicle's paint. You should always store it in its original container and in a location which is out of reach of children. Do not spill the fluid and do not fill the brake fluid reservoir beyond the "MAX" mark. The brake fluid could ignite upon contact with hot engine parts and cause serious burns.◀

Comply with the applicable environmental laws regulating the disposal of brake fluid.◀

ileage can be accumulated in erent ways.
e point of view of maintenance, miles (100,000 km) accumulated -distance urban driving are not valent of the same distance at moderate speeds in long- e highway travel.
nse to this fact, the BMW Main- System monitors operating ns as the basis for determining mum service intervals for your al vehicle.
W Maintenance System in- he Engine Oil Service and In- s I and II.
ning the maintenance intervals ng to the actual loads on the car very kind of operating situation. r, even those who drive only stances – significantly less than iles (10,000 km) annually – have the engine oil changed at ery 2 years since oil deteriorates e, regardless of use.

Service and Warranty Information Booklet (US models) or Warranty and Service Guide Booklet (Canadian models)

Please refer to the Service and Warranty Information Booklet (US models) or to the Warranty and Service Guide Booklet (Canadian models) for additional information on maintenance intervals and procedures.

As a precaution against rust, it might be a good idea to have the body checked for damage from rocks or gravel at the same time, depending upon operating conditions.

Have your BMW center do the maintenance and repair.

Your BMW center is always informed on the latest maintenance work and repair techniques and equipped with the required special tools. In addition, checking parts known from experience to be subject to wear is a permanent part of the maintenance specifications.

Be sure that all maintenance work is confirmed in the Service and Warranty Information Booklet (US models) or in the Warranty and Service Guide Booklet (Canadian models).

These entries will constitute your proof that the vehicle has received regular maintenance. They are also required in the event of a warranty claim.◀

es with rain sensor*:
the windshield regularly. Wax
utomatic car washes or insects,
ample, can cause malfunctions in
nction of the rain sensor.

Turn the rain sensor off in auto-
matic car washes. If you do not,
ge may occur if the wipers switch
ntentionally.◀

of the car which are inaccessible
automatic washer – such as door
loor and hood edges, etc. –
d be cleaned by hand.

winter months, it is especially im-
t to ensure that the car is washed
egular basis. Large quantities of
d road salt are difficult to remove,
ey also cause damage to the ve-

f spray wands or high-pressure
washers are used, be sure to
ain an adequate distance between
ray source and the vehicle's sur-
nadequate distance and exces-
ressure can damage or weaken
ish, making it more susceptible to
quent attack. In addition, mois-
ould penetrate to vehicle compo-
leading to long-term damage.◀

When cleaning the headlamps, please observe the following:

- Do not clean by wiping with a dry cloth (scratches). Never use abrasives or strong solvents to clean the covers
- Remove dirt and contamination (such as insects) by soaking with BMW Car Shampoo and then rinsing with plenty of water
- Always use a deicer spray to remove accumulated ice and snow – never use an ice scraper.◀

After washing the car, apply the brakes briefly to dry them. Braking efficiency might otherwise be reduced by the moisture, and the brake rotors could also be corroded.◀

ing upon material and type of perforation of paint layer), physses from sand, road salt, etc., can cause corrosion to ending beneath the finish, starte point of impact.

rt, tar spots, dead insects, anippings (strong alkali effect) and retions (resins and pollen) all substances capable of causing when allowed to remain on the your car for any period of time etching, flaking, separation in coat).

trial areas, deposits from fly e, oil deposits, sulfur-dioxide in ation (acid rain) and other envital pollutants will all damage the of the car unless adequate pros provided.

In coastal regions, high levels of atmospheric salt and humidity promote corrosion.

In tropical zones, temperatures of over 105 ºF (40 ºC) in the shade prevail, in addition to heavy ultraviolet radiation and high humidity. Under those circumstances, light exterior finishes reach temperatures of up to 175 ºF (80 ºC) and dark finishes up to 250 ºF (120 ºC).

ng your car

ct the finish using carnauba or etic-based waxes only.

est way to determine when the needs to be waxed is by noting water stops beading on the sur-

an use a glass cleaner to remove ax or silicone that may have been the windows during waxing.

Use cleaning and car-care products that you can obtain r BMW center.◀

Paint damage

You can touch up small areas of damage with BMW spray paint or a BMW touch-up stick.

The paint color code for your car is provided on a sticker located on the right hand side under the hood and on the first page of your Service and Warranty Information Booklet.

Damage caused by flying stones, scratches, etc., must be touched up without delay to prevent rust from forming.

If corrosion has started to form in an area with paint damage, remove all rust and clean the area. Then prime the area with a BMW Primer Stick. Finally, apply the finish coat. After a few days, polish and protect the touched-in areas.

More extensive paint damage should be repaired professionally in accordance with the manufacturer's instructions. Your BMW center uses original BMW finish materials in accordance with approved repair procedures.

for other vehicle nents and materials

oy wheels should be treated y wheel cleaner, especially dur- winter months. However, do not ressive products containing ac- ng alkalis or abrasives. Do not am cleaners operating at tem- es above 140 ºF (60 ºC). Follow ufacturer's instructions.

ehicle has chrome parts* such ow moldings, door handles or ms, clean these parts carefully ple clean water, especially if e an accumulation of road salt. hrome polish for an additional nt.

components, vinyl upholstery, ers, lamp lenses, the clear cover strument panel and compo- ith a sprayed dull black surface cleaned with water (add plastic as required). Do not allow mois- soak through the seats or head- ver use solvents such as lac- nner, heavy-duty grease , fuels, etc.

Rubber components should be cleaned with water only; a rubber treatment or silicone spray may also be applied.

The safety belts should be cleaned with a mild soap and water solution without being removed from the car. Never attempt chemical or dry cleaning, as damage to the belt fabric could result.

After cleaning, never allow the inertia reel to retract the belts until they are completely dry. Dirty safety belts prevent the inertia reel mechanism from retracting the strap properly, and thus constitute a safety hazard.

Heavily soiled floor carpets and mats* can be cleaned with an interior cleaner. The floor mats can be removed from the vehicle for cleaning.

Please use only a damp cloth to clean wooden fascia panels and components. Follow up by drying with a soft cloth.

Use cleaning and car-care products that you can obtain at your BMW center.◀

otection against dampness or
ure, treat the leather with a BMW
gnating agent.

commend that you perform this
dure twice a year on leather ex-
to normal use.

should be wiped up immediately.
ve grease and oil stains without
g, but rather by dabbing with
emover.

upholstery is to be exposed to in-
sunlight or if the vehicle is to be
for an extended period, cover all
r surfaces (or, better yet, the win-
to prevent fading.

Use cleaning and car-care
products that you can obtain
r BMW center.◀

Cleaning agents can contain sub-
stances that are dangerous or
health risks. Therefore, always
y with the warnings and danger
s on the package.
the doors or windows on your ve-
before cleaning the interior. Never
your vehicle with cleaning agents
vents) not specifically intended
s purpose.◀

ations may not be made on ei-
wiring or the individual compo-
the airbag system. These in-
e padded steering wheel hub,
ument panel, the side trim pan-
e front or rear doors and the
ars or the sides of the headliner.
pply adhesive materials to these
ents or cover or modify them in
. Do not attempt to remove or
le the steering wheel.
re compliance with official
egulations, entrust disposal of
enerators to an authorized
enter.
ssional attempts to service the
could lead to failure in an emer-
r undesired airbag activation,
which could result in personal

Vehicle storage

Consult your BMW center regarding the required special procedures if you intend to store the vehicle for longer than three months.

Emitting Diodes (LEDs)

nitting diodes installed behind
ent lenses serve as the light
or many of the controls and dis-
your vehicle. The concept be-
ir operation is related to that
ed for lasers, and they are offi-
signated as Class 1 light-emit-
des.

not remove the protective lens
d avoid staring directly at the
d beam for extended periods
hours), as inflammation of the
d result.◀

An illuminated Service Engine amp informs you of the need for service, not of the need to stop he vehicle. However, the sys- ems should be checked by your BMW center at the earliest pos- portunity.

ertain conditions, the indicator k or flash. This indicates a rather evel of engine misfire. When urs, you should reduce speed sult the nearest BMW center as possible. Severe engine misfire y a short period of time can se- damage emission control com- , especially the catalytic con-

When the filler cap is not properly tightened, the OBD system can detect the vapor leak and the indicator will light up. If the filler cap is subsequently tightened, the indicator should extinguish within a few days.◀

placement procedures:
board tool kit 166
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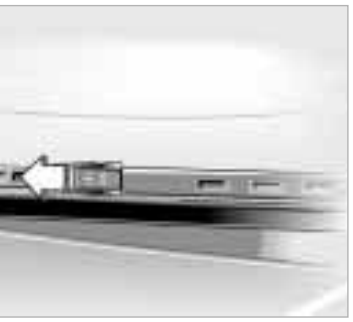
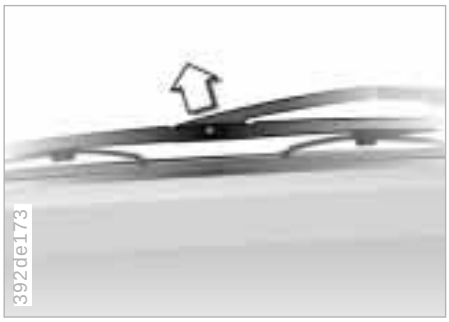
r blades



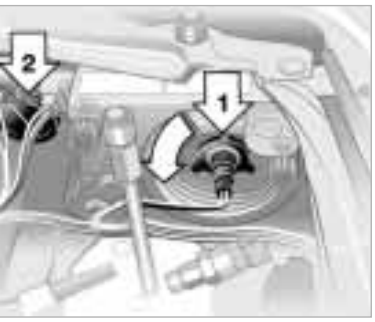
he wiper arm up slightly and
t firmly.
back the release (arrow) and
e wiper blade back toward the
of the wiper arm.
the new blade and slide the
e back into position.



Rear*

1 Hold the wiper blade on the window and remove/unclip the wiper arm at the articulated joint (arrow).
2 Insert a new wiper blade and press it on/clip it into the wiper arm.

Use only wiper blades approved by BMW.◀



ustration shows the right-hand
e compartment.

For checking and adjusting head-
amp aim, please contact your
center.◀

w beams

lb, 55 watts

h beams

ulb, 60 watts

The H7 bulb is pressurized. There-
ore, wear safety glasses and pro-
e gloves. Failure to comply with
ecaution could lead to injury if the
s accidentally damaged during re-
ment.◀

Low beams:

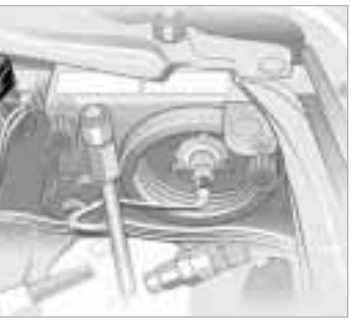
1 Turn the bulb holder to the left (arrow) and remove.
2 Remove and replace the bulb.

High beams:

1 Turn the bulb holder to the left and remove.
2 Disconnect the plug.
3 Connect the new bulb holder with bulb to the plug. Be sure that it is securely engaged.
4 Install in the opposite order of work.

When cleaning the headlamps, please observe the following:

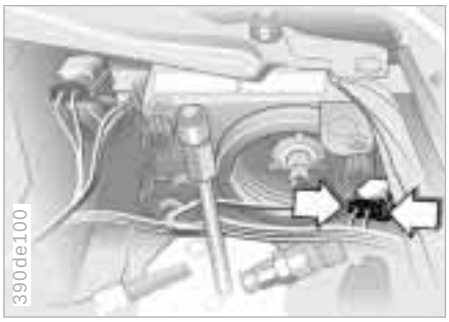
- Do not clean by wiping with a dry cloth (scratches). Never use abrasives or strong solvents to clean the covers
- Remove dirt and contamination (such as insects) by soaking with BMW Car Shampoo and then rinsing with plenty of water
- Always use a deicer spray to remove accumulated ice and snow – never use a scraper.◀



g lamp

ulb

he bulb holder to the left (arrow)
emove.
ve and replace the bulb.



Turn signals/Parking lamps (side marker lamps), front

Dual-filament bulb, 28/8 watts

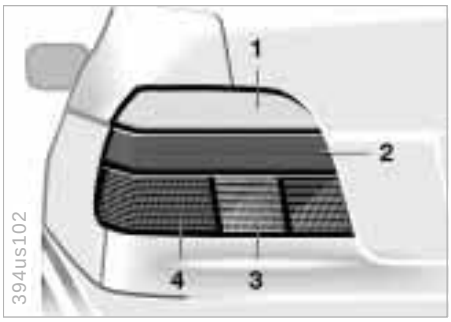
1 Press the tabs (arrow) together and extract the bulb holder.
2 Press gently on the bulb, turn it to the left and remove.
3 After replacing the bulb insert the holder (note lug positions) and snap it back into place.

fog lamps

lb, 55 watts

The bulb is pressurized. There-
ore, wear safety glasses and pro-
e gloves. Failure to comply with
ecaution could lead to injury if the
s accidentally damaged during re-
ment.◀

the cover panel next to the
dlamp forward to remove.
sen both screws (arrows) and
vel out the lamp assembly.
ease the spring on the back of the
p and turn the cover to the left.
ease the clamp, remove the
tact base and replace the bulb.

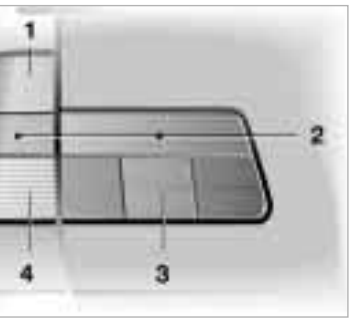


Tail lamps – sedan

Tail lamp: 5 watt bulbs
Remaining bulbs: 21 watts

1	Turn signal	yellow
2	Tail lamp/Side marker lamp, reflector	red
3	Backup lamp	white
4	Brake lamp	red

In the event of a failure of both lamps of a rear lamp assembly, the brake lamp assumes the function of the tail lamps.◀



mps – sport wagon

p: 5 watt bulbs
ng bulbs: 21 watts

signal	yellow
amps/Side marker	red
up lamp	white
lamps, reflector	red

the event of a failure of both mps of a rear lamp assembly, e lamp assumes the function of amps.◀

Lamps in the rear apron panel:

1 Open the cover in the side panel.
2 Turn the quick-release fastener and remove the trim panel in front of the bulb holder.
3 Open the quick-release fastener (arrow) and remove the bulb holder.
4 Apply gentle pressure to the bulb while turning it to the left to remove.

If a subwoofer* is installed behind the right-hand panel, unscrew the T-screw and swing the subwoofer to the side.

er (high-mount) brake lamp

tt bulb

en the luggage compartment lid/
gate.
lip the cover panel (on the under-
e of the package tray) with a
ewdriver (arrow).
n the bulb holder to the left and
ove.
ly gentle pressure to the bulb
e turning it to the left to remove.

wagon: LED strip in the tailgate.
e contact a BMW center in case of
unction.

License plate lamps

5 watt bulb

1 Insert a screwdriver into the slot and press to the right (arrow); this disengages the lamp.
2 Remove the lamp and replace the bulb.

port wagon

amp: 5 watt bulbs

screwdriver to pry out the lamp
above.
ve the lens.
ce the bulb.

amp (10 watt bulb) with
lamp (6 watt bulb)

a screwdriver, press the lamp
o the button out to the side.
ve the lens.
ce the bulb.

ell lamps

ulb

screwdriver to press the lens
the side.
ce the bulb.

compartment lamp

ulb

a screwdriver to the recess to
e lamp out.
ve the reflector.
ce the bulb.

Luggage compartment lamps

Lamp on the underside of the rear parcel tray: 10 watt halogen lamp

Lamp in luggage compartment:
10 watt bulb

1 Apply a screwdriver to the recess to pry the lamp out.
2 Remove the reflector.
3 Replace the bulb.

Luggage compartment lamps

Headliner lamps: 10 watt bulbs

1 Use a screwdriver to push the lens to the side.
2 Replace the bulbs.

Lamps on the apron of the luggage compartment lid/tailgate:
10 watt bulb

1 Use a screwdriver to pry out the lamp at the upper edge.
2 Remove the reflector.
3 Replace the bulb.

on the jack on a firm support
e.
t place wooden blocks or similar
s under the jack. If this is done,
ck might not be able to reach its
pport capacity because of the
l height.
t lie under the vehicle or start the
e when the vehicle is supported
jack – risk of fatal injury.◀

What you will need

In order to avoid rattling noises later, note the position of the tools when you remove them and return them to their original position when you are through using them.

- Car jack
  sedan: Fold back the luggage compartment floor mat for access, then unscrew the wingnut to release the jack (arrow).
  sport wagon: Raise the floor panel and spare tire cover (refer to page 118).
  When you have completed work, screw the jack all the way back down. Fold the handle back and insert it in its holder
- Wedge (wheel chock)
  Located next to the jack. Loosen the wing nut to remove it

lure

d carefully and comply with the ty precautions on the previous e.

ure the vehicle against rolling: e the wedge against the rear ace of the front tire on the side osite the side being raised. If vehicle is parked on a down- l slope, place the wedge se- ly in front of the tire. If the el must be changed on a sur- with a more severe slope, take tional precautions to secure the cle from rolling.

els with full wheel covers*: ch into the ventilation openings pull the cover off.

els with adapter*: Position the olt adapter on the lug bolt r. Then apply the lug wrench turn it to the left (refer to the ration).

5 Wheels with hub cover*: Pry the hub cover off with the screwdriver in the slot.
6 Loosen the lug bolts 1/2-turn.
7 Position the jack at the jacking point closest to the flat tire so that the jack base is vertically below the jacking point and the entire surface of the head of the jack will move into the square recess of the jacking point (refer to the illustration detail) when the jack is cranked.
8 Jack the car up until the wheel you are changing is raised from the ground.
9 Unscrew the lug bolts and remove the wheel.
10 Remove accumulations of mud or dirt from the mounting surfaces of

factory. Other wheel covers may securely.◀

heels with hub covers:
osition the hub cover and press it tightly.
equipped with lug bolt covers:
gn the arrow on the cover with e line in the wheel and press the ver into place.
heck and correct the air pressure the earliest opportunity.
r vehicles with Tire Pressure Control (RDC)*:
ter mounting the spare tire or correcting the inflation pressure, reactivate the system. Refer to page 92.

The vehicle jack is designed for changing tires only. Do not attempt to raise another vehicle model with it or to raise any load of any kind. To do so could cause accidents and personal injury.
To ensure continued safety, have the lug bolts checked with a calibrated torque wrench [torque specification 72 lb-ft (100 Nm)] at the earliest opportunity.◀

When storing the wheel, take care to ensure that you do not damage the retaining pin in the spare tire recess.

If light-alloy wheels other than original BMW light-alloy wheels have been mounted, it may be necessary to use different lug bolts for those wheels.

Replace the defective tire as soon as possible and have the new wheel/tire balanced.

ry

tion location

tery is located behind the right-
le trim panel in the luggage
ment.

trim panel down with the
at the top. On the sport wagon,
e button.

woofer* is installed on the sport
loosen the T-screw and swing
woofer to the side.

e upper surface of the battery
clean.

Symbols

You will find the following symbols on your car battery. To avoid injury, please comply with the corresponding precautions whenever you work with or near the battery.

Please read the following information before working with the battery.

Wear eye protection. Do not allow particles containing battery acid or lead to come into contact with your eyes, your skin, or your clothing.

Battery acid is extremely corrosive. Wear eye protection and protective gloves. Do not tip the battery. Battery acid can leak from the ventilation openings.

Be sure that children keep well away from batteries and battery acid.

Never allow sparks or open flame near the battery. Do not smoke in the vicinity of the battery. Avoid sparks from electrical cables or electrical equipment. Turn the key to position 0 in the steering lock during the disconnection or connection of the battery. Never short-circuit the battery terminals. There is a danger of injury from powerful sparks.

ge condition

an read the charge condition
battery with the "Magic Eye*"
rometer):

en: Adequate charge
ck: Not charged adequately.
battery must be recharged.
ase contact your BMW center
ow: Replace the battery.

The projected service life of the
battery can only be reached if the
y is fully-charged at all times.
the charge condition of the bat-
equently if the vehicle is used pri-
for driving short distances.◀

Charging the battery

If the battery is charged in the vehicle: Do not charge the battery with the engine running.

Before performing any work on the electrical system, disconnect the cable from the negative terminal. If you do not, short circuits can create the risk of fire or personal injury.◀

If you plan to store the vehicle for more than four weeks, disconnect the battery from the vehicle electrical system by disconnecting the cable at the negative terminal and then recharge using a suitable charging device.

If you intend to store your car for longer than 12 weeks: Remove the battery, charge it and store it in a cool (but frost- and dust-free) room. Everv three months and before reinstalling the battery, have it recharged. If it is not recharged, it will not be serviceable. Every time the battery is discharged, especially over extended periods, its service life is reduced.

emoving the battery, first dis-
the negative terminal, then the
terminal. Remove the protec-
(1) and unscrew the threaded
ion of the battery bracket (2).
stalling the battery, connect the
terminal first, then connect the
e terminal.

hen installing a battery, be sure
t it is mounted properly. Install
ure the protective bar. If the
s not mounted and fastened
, it will not be adequately
in case of an accident.◀

turn used batteries to a recy-
ng point or your authorized
enter. Maintain the battery in an
position for transport and stor-
cure the battery against tilting in

Fuses

When an electrical accessory fails to operate, switch it off and inspect the fuse.

In glove compartment

1 Open the glove compartment and turn the two white quick-release knobs to the left. Spare fuses and plastic tweezers are located on the fuse holder.
2 Use the plastic tweezers to remove the fuse for the accessory or equipment that has stopped working.
3 If the fuse is burned through (the metal strip will have melted and separated), replace it with a new fuse of the same ampere rating (color code).

e luggage compartment

he handle to pull down the trim on ght wall.

of the fuses, their respective am- atings and the equipment in their s is provided on the rear of the rim.

In the luggage compartment – sport wagon

Open the right access door by pressing the button and pull the trim panel to the side.

A list of the fuses, their respective ampere ratings and the equipment in their circuits is provided on the rear of the side trim panel.

If a subwoofer* is installed, loosen the T-screw and swing the subwoofer to the side.

l release – sport wagon

se the right-hand panel in the
ge compartment with the button
old the panel down.
he knob with the fuel pump
ol (arrow).

woofer* is installed, loosen the
and swing the subwoofer to
.

Sliding/Tilt sunroof

Manual operation

1 Remove the interior lamp (refer to page 171), reach into the opening and push out the panel.
2 Use the Allen key from the vehicle tool kit to turn the sliding/tilt sunroof in the desired direction (refer to page 166).

ease the two quick-release
eners of the cover for the onboard
kit in the tailgate. Raise the
er.
nove the plastic plugs (arrow) and
toward the interior. The tailgate
be released.
en the tailgate. Press the plugs
k into place and close the cover
the quick-release fasteners.
ition the two side covers and
e them.

by connecting the jumper cable
he positive terminal of the sup-
ehicle to the positive terminal
ector located in your BMW's en-
compartment. The cover of the
ary terminal for jump starting is
ed with a "+" sign (refer to the
ation). Remove the cover by
g tab. The illustration shows the
nal start support point of the
528i. For the BMW 540i, refer
ngine compartment" on
146.

5 Then connect the negative terminals. Attach the cable to either the support vehicle's negative battery terminal, or to a suitable ground on its engine or bodywork. Then connect the other end of the cable to a ground on the engine or body of the vehicle which is to be started. There is a special nut on the strut dome of your BMW; refer to the arrow in the illustration.

Follow the same sequence for connecting the jumper cables if you assist in jump-starting another vehicle. If you do not, there is a risk of injury caused by spark generation at the battery.◀

fitting

crew-in tow fitting is stored in the rd tool kit; be sure that it remains vehicle at all times. This fitting igned for installation in the tow ts located at the front and rear of hicle, and is intended for towing oper road surfaces only.
uld not be used to pull a vehicle deep snow, mud, sand, etc. Al- observe all applicable towing laws egulations.

ss to tow sockets

pressure to the arrow symbol on ver panel to remove.

Rear:
Apply pressure to the arrow symbol on the cover panel to remove.

Screw the tow fitting in until it bottoms firmly. If this is not done, the threads could be damaged.
Never attach tie-down hooks, chains, straps, or tow hooks to tie rods, control arms, or any other part of the vehicle suspension, as severe damage to these components will occur, leading to possible accidents.◀

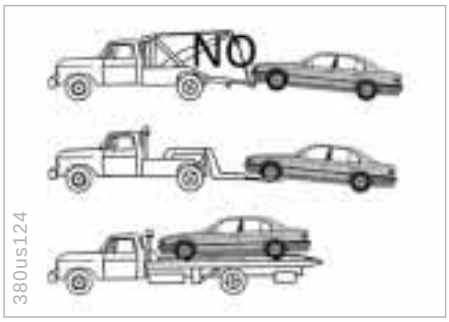
Use only a nylon towing strap to tow the vehicle, since the inherent resilience of this material helps protect both vehicles from sudden jerking movements.

g a vehicle with automatic ission

the selector lever in position N
g speed:
45 mph (70 km/h)
g distance:
95 miles (150 km)
the ignition key at position 1 to
e that the brake lamps, turn sig-
horn and windshield wipers re-
operative, and to prevent the
ng lock detent from engaging.
h on the hazard-warning system
rve country-specific regula-

me means of identifying the ve-
tow, for instance, place a sign
ng triangle in the rear window.

ake sure that the ignition key
mains in position 1 even when
trical system has failed to pre-
steering lock from engaging.
ering and brakes are without
ssist when the engine is off.
ans that increased effort is
for steering and braking.◀



Towing with a commercial tow truck

- Do not tow with sling-type equipment
- Use a wheel lift or flat bed carrier
- Please comply with applicable towing laws.

Never allow passengers to ride in a towed vehicle for any reason.◀

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aptive Transmission Control
ATC) 188
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ags located under the marked
nflate and unfold in a matter of a
seconds. In this process they
ugh the rated breaking points
holstered covers or press them

e the inflation process must be
instantaneous, it is necessarily
anied by a certain amount of
and inflation noise. The gas
e system employs to inflate the
s not dangerous. Smoke
as the gas dissipates.
re process is completed within
s of a second.

ATC*

On vehicles with automatic transmission, Adaptive Transmission Control (ATC) uses a number of factors to calculate the gear which provides the maximum efficiency. In this process it monitors your personal driving style, the situation in which you are driving, the condition of the road and the traffic conditions.

ATC recognizes your personal driving style from the positions and movements of the accelerator pedal, deceleration when braking and lateral acceleration through curves. Four different shift characteristics – from comfort-oriented to performance-oriented – are available for selection by ATC.

C+T/DSC*

ion sensors monitor the number olutions of the wheels. When ped with DSC, they also monitor ng angle, lateral acceleration, pressure and the movement of hicle around its vertical axis.

rences in the wheel speeds the system counteracts the dan- wheelspin by reducing torque. If sary, the system also responds dditional applications of the s at the rear wheels.

system detects an instability in the e's condition, the braking action so be directed to help the front s by the DSC in order to help sta- the vehicle.

ay need some time to become tomed to this system intervention. ver, it guarantees optimum drive and driving stability.

raking intervention may be npanied by a certain degree of

n numerous factors combine
se inherent limitations on the
n quality available from mobile
specially designed systems can
oyed to minimize their effects:

ersity Antenna system employs
FM antennas integrated within
window to provide three sepa-
rces for receiving broadcast
An integral processor automati-
ects the antenna with the best
ption quality at any given time.
e the ongoing antenna selection
is completed within milli-sec-
remains inaudible to the radio

BMW active seat*

BMW seats are configured for your orthopedic well-being. The active seat is an engineering enhancement of BMW's seats, designed to ensure less fatigue during extended trips while sitting with little movement. The seat is no longer a passive element between the road, the running gear and the passenger. Instead, it creates minor and imperceptible shifts in your weight by an active change in the contour of the seat surface. The basic seat position is not changed as this occurs.
Fluid cushions are located below the surface of the seat in the seat's upholstery on the left and right. The fluid is circulated slowly back and forth between the two cushions by means of a pump. This causes a movement of the spinal column which is nearly unnotice-

ety belt tensioner

afety belt tensioner responds to
e frontal collisions by tightening
lts to ensure that occupants
n firmly positioned in their seats.
-pressure system retracts the
e assembly to tension the shoul-
d lap belts within fractions of a
d. This reduces the tendency to
under the lap belt.

or rearview mirror with automatic dimmer*

rior rearview mirror with auto-
mming feature reduces glare
owing traffic by adapting the in-
f the reflected images to corre-
o levels of light registered by the
nsors. The mirror reverts to its
ed setting as soon as the light
disappears. One of these sen-
mounted on the front of the mir-
sing and is designed to monitor
els in the area immediately for-
the vehicle. The second sensor
ated within the mirror's glass.
ctronic control system operates
paring the respective levels of
s intensity in front of and behind
The difference provides the ba-
meter used to modulate an
al current and induce chemical
s in a semisolid layer incorpo-
the lens.

The semisolid reacts chemically to this electrical current, thus providing infinitely-variable dimming of the mirror (electrochromic technology).

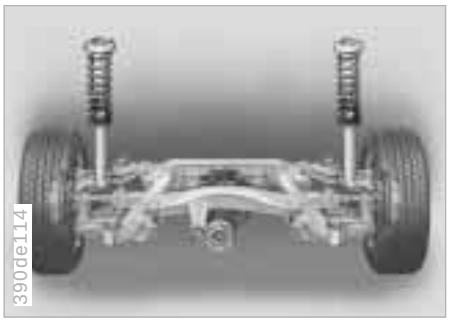
As a result, it is no longer necessary to dim the mirror manually, and the driver can maintain full concentration on traffic.

the system is set to the "Intermit-
wiper speed, the wipers react
diately – if water is splashed onto
ndshield by vehicles traveling
of you, for example. As a result,
n sensor provides a contribution
ing safety and comfort.

ery wheel, there are antennas in
y which receive the signals from
wheels. A central electronics
evaluates the quadruple signals
wards any changes.

C provides an important contri-
o driving safety.

Integrated rear suspension

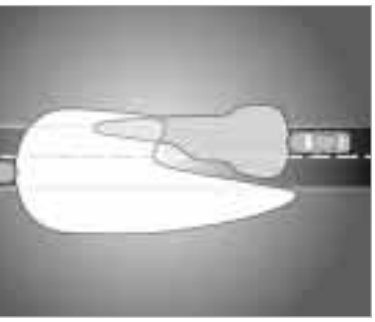


The control arms on the patented integrated aluminum rear axle assembly are not mounted directly on the body. They are mounted elastically on a chassis sub-frame which is joined in turn with elasticity to the vehicle body. The resulting double elastic suspension system effectively absorbs the forces resulting from bumps and road surface irregularities.

The compliance rates of the integrated rear axle assembly's control arm mounts have been precisely calibrated to help provide supplementary adjustment in the tracking angle of the rear wheels (programmed self-steer effect). The ultimate result is enhanced safety and control under all conditions.

The illustration shows the rear axle of the sedan. With the lightweight, compact rear axle of the sport wagon, the shock absorbers are positioned at an angle.

on lamps*



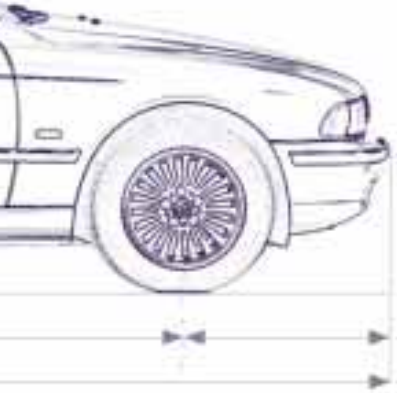
enon lamps light up the side and areas of the vehicle with signifi- more brightness and uniformity he traditional halogen lamps.

enon lamp, an electric arc es the filament in order to gener- ense illumination. A gas mixture uartz glass tube with metal vapor ted by a high electric voltage. The at is generated is then sustained ower voltage. When the lamp is l on, a brief period is needed for l beam strength to build up. Maxi- brightness is attained in approx. conds.

Xenon lamps provide significantly-improved visibility, especially during adverse weather conditions and driving situations (driving at night in heavy rain or through road repair areas where there are no lane markers, for instance).

Vehicles with xenon lamps are equipped with automatic headlamp range control. As a result, the highway is always optimally lighted, regardless of load conditions, and drivers in on-coming traffic are not blinded.

Xenon lamps make a significant contri-bution to highway safety since other highway users, or bicyclists and motor-cyclists in the right lane, and pedestri-ans are more easily detected.



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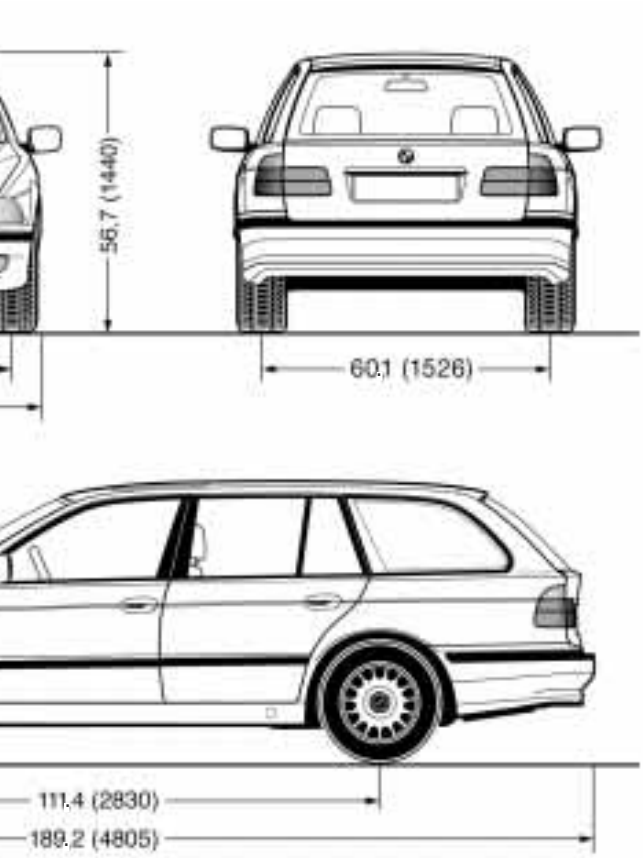
BMW 528i/sport wagon	BMW 540i/sport wagon
170.4 (2,793) 6	268.4 (4,398) 8
193 5,500	282 5,400
206 (280) 3,500	324 (440) 3,600
10.2	10.0
3.31 (84.0) 3.31 (84.0)	3.26 (82.7) 3.62 (92.0)
Digital electronic Engine-Management System	

inches (mm).
W 528i 37.1 ft (11.3 m), BMW 540i 37.4 ft (11.4 m)



nches (mm).
V 528i 37.1 ft (11.3 m), BMW 540i 37.4 ft (11.4 m)

	BMW 528i	BMW 540i
on, full tank of fuel, options not included)		
lbs. (kg)	3,495 (1,585)	3,748 (1,700)
lbs. (kg)	3,549 (1,610)	3,803 (1,725)
lbs. (kg)	4,508 (2,045)	4,762 (2,160)
lbs. (kg)	4,563 (2,070)	4,817 (2,185)
lbs. (kg)	2,138 (970)	2,381 (1,080)
lbs. (kg)	2,579 (1,170)	2,635 (1,195)
lbs. (kg)	220 (100)	220 (100)
weight may not be exceeded.		
cu ft (l)	16.2 (460)	16.2 (460)

	BMW 528i	BMW 540i
, full tank of fuel, options not included)		
lbs. (kg)	3,726 (1,690)	–
lbs. (kg)	3,781 (1,715)	4,056 (1,840)
lbs. (kg)	4,817 (2,185)	–
lbs. (kg)	4,872 (2,210)	5,093 (2,310)
lbs. (kg)	2,160 (980)	2,381 (1,080)
lbs. (kg)	2,844 (1,290)	2,910 (1,320)
lbs. (kg)	220 (100)	220 (100)
eight may not be exceeded.		
cu ft (l)	14.5 – 53.9 (410 –1,525)	14.5 – 53.9 (410 –1,525)

			Notes
approx. 18.5 approx. 2.1 approx. 2.6	(approx. 70) (approx. 8) (approx. 10)	 – BMW 528i – BMW 540i	Fuel specification: Refer to page 29
approx. 3.7 approx. 6.3 approx. 1.1	(approx. 3.5) (approx. 6.0) (approx. 1.0)		For details: Refer to page 148
11.1 (10.5) 12.7 (12.0)	– BMW 528i – BMW 540i		For details: Refer to page 151
6.9 (6.5) 7.9 (7.5)	– BMW 528i – BMW 540i		"High Performance Synthetic Oil" for gasoline engines. Specifications: Refer to page 150
–			Lifetime fluid, no fluid change required

belts

28i:

ump – Alternator –
teering
K x 1555

npressor
K x 906

40i:

ump – Alternator –
teering
K x 1635

npressor
K x 1004

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Minimum	
or rated performance	
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ne oil

y	

pace between the two marks on
pstick corresponds to approx.
S quarts (1 liter).

nflation pressures		Summer		Winter	
		Front	Rear	Front	Rear
sons					
sons or 4 plus luggage					

ble

01 41 0 155 012 US En

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